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# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region

OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE

VOLUME XII; No. 1

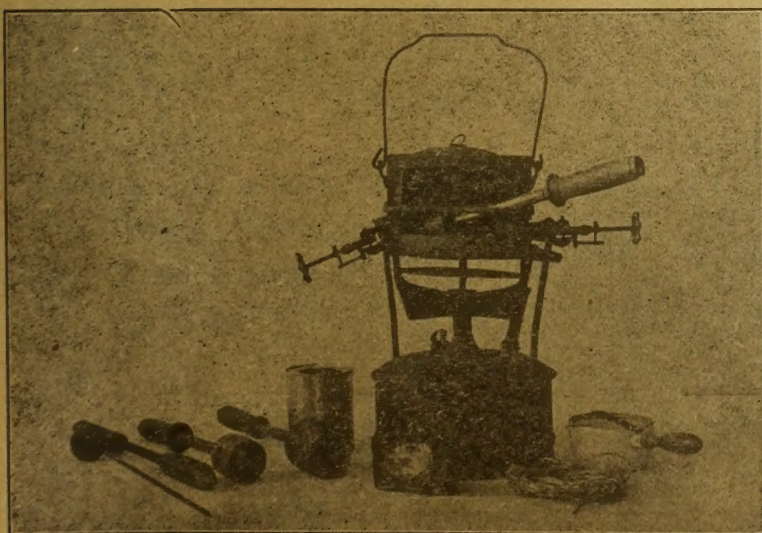
LEHI AND SALT LAKE CITY, UTAH

AUGUST 7, 1915

## Canning Fruits and Vegetables On The Farm



INTERIOR VIEW OF CANNING PLANT



SOLDERING OUTFIT



RETORTS, SCALDING VATS.

STRONG 31 1915 20 225



# Canning Fruits and Vegetables On The Farm

The following excerpts are taken from a bulletin of above name by C. C. Vincent of the Agricultural Experiment Station Moscow, Idaho.

To determine whether home canning will pay on the average farm, the best methods of canning peas, beans, corn, tomatoes and other vegetables, the cost, method employed, was the purpose or plan of the author. It represents three years of practical investigation.

The only requirement to successfully operate a canning plant, is the complete sterilization of the products. This is accomplished by heat.

The types of canning outfits sold upon the market are of three distinct kinds: (a) hot water with open boiler; (b) hot water with steam combination, having a close fitting cover; (c) steam-pressure outfit.

The outfit installed consists of two steam-tight retorts, 27 inches deep and 25 inches in diameter and each will hold at one cooking, 144 No. 2 cans; 90 No. 2½ cans, and 21 No. 10 cans. They are made of heavy boiler plate and thoroughly riveted to withstand the pressure necessary to process the different kinds of fruits and vegetables. The close-fitting cover is made of cast iron, having a groove packed with asbestos rubber, to prevent the steam from escaping. Galvanized iron crates, having openings in the bottom and sides, to allow free access and circulation of air, come with each retort. If woven wire crates are preferred they may be used instead of the heavier galvanized sheet-iron ones.

The three horse vertical steam boiler is equipped with tubular flues, steam gauge, safety valve, water gauge, and a pump to connect the boiler to the retort or process tank. The iron cranes consist of drum and ratchet, handle, pulley, hooks for crates, and top-and-bottom swivel castings. The wood necessary to construct the crane can very easily be found somewhere on the farm.

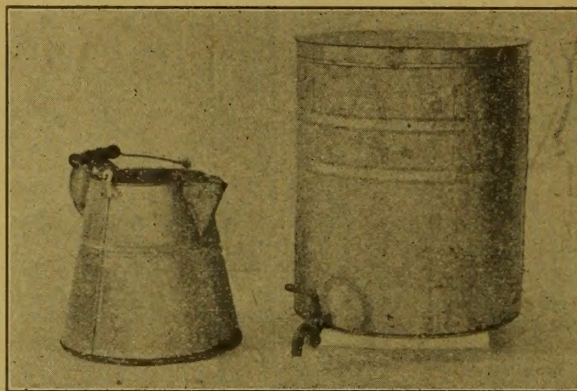
The soldering apparatus is also included and is a very important tool in the canning business. There are two parts: one a circular steel, made to fit the circumference of the can cap; and the other a pointed rod used to steady the steel in the operation of

capping. The rod serves to hold the cap down while the melted solder is setting. When heating the iron the rod is slipped out.

The fire pot or blast furnace is so constructed that two steels and two coppers may be heated at one time. The two tipping coppers are also furnished and are used to seal the small vent in the caps.

There are a number of other accessories which are just as essential as the items furnished that must be secured before the plant is properly equipped for work.

To complete the outfit the following articles were secured; one grading table, two peeling tables, one packing table, one capping table, one soldering table, one scalding vat, two cooling vats, two sets of capping steels, can tongs, hoisting rope, solder, syrup hydrometer, paste brush,



Syrup Receptacles

flux brush, fruit and vegetable funnel, fruit and tomato knives pitting spoons, cherry stoner, apple parer, syrup can, stoner, aprons, and caps for help, clock, scales, besides pans, pale tub, etc. for receiving fruits and vegetables.

One handy with tools can very easily make the necessary tables for the cannery. The cooling and scalding vats can be secured from almost any manufacturing firm, at reasonable prices, or can be made by the local tinsmith. To keep the capper busy most of the time, it will be necessary to secure an extra set of capping steels.

## Cans

The tin can is almost universally used as a container for all fruits and vegetables. It is used in commercial as well as in home canneries.

## Labor

The amount of help needed to operate a canning plant successfully will depend almost entirely upon the character of the outfit installed. If one of the smaller portable outfits is used, no extra help is needed. The various members of the family can put up what fruits and vegetables are needed for winter use.

In the larger plants, having a capacity of from 1000 to 10,000 cans daily, extra help will need to be employed. As the range of operations will be wider in such a plant each person should have a regular job. There is plenty of work, such as preparing fruits and vegetables for the can, soldering, filling cans, etc. The capacity of any plant will depend almost entirely upon

on the speed of the employees as well as the number employed. The help should be so arranged that there will be no one idle when the plant is busy.

There should be as much system in running a canning factory as in any other business.

## St ps Involved In Handling Products

All products should be delivered to the cannery in first-class condition, hence the necessity for careful handling. Bruises may be avoided by delivering small fruits and vegetables in shallow crates and baskets. Upon arrival at the cannery, the first step is grading or sorting for quality. All defective, decayed specimens. The fruits and vegetables not ripe enough to make a good finished product should be set aside to ripen.

## Washing and Cleaning

After the products have been sorted they should be carefully washed and cleaned. For instance, tomatoes must be scalded to loosen the skins, peeled, and cored; strawberries washed, stemmed, and hulled; peas shelled and blanched; apples, pears, and peaches must be washed, peeled, and cut into pieces of the proper size.

# Placing the Blame For Jelly Failure

If you have suffered failure to any degree, in making jelly or putting up fruit, you undoubtedly would be interested to find the cause.

It is simple enough, when the proper precautions are used to make good jelly. All recipes used are not the same. You may use a different recipe to that of your neighbor, but you will both have to use a pure preservative or you will fail. Failure is not always the fault of the preservative—but be sure of the preservative before you start.

At one time there was a false notion with some people—due perhaps to the newness of the beet sugar industry in this country—that cane sugar made the best jelly. However, it has been clearly demonstrated that beet sugar will do all that any other sugar will do, with the most gratifying results.

Europe, with its reputation for attractive confections and delicious fruit preparations, uses practically no other kind than beet sugar.

For highest standard of sugar perfection order and insist on—



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# BULLS

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has been filled, the top is cleaned of all fruit juices and the cap placed over the opening. The flux is now applied to the cap with a small brush and the solder is melted, with one of the hot "capping steels." If the iron is hot, two or three turns around is sufficient to melt the solder smoothly. The rod which runs through the center of the steel is long enough to allow the steel to be raised from the cap without releasing the pressure. The steel should be raised slowly for if raised too quickly, the solder will not set.

#### Exhausting

In most of the commercial canneries, all articles that are packed cold and not covered with a hot syrup or brine are exhausted. Exhausting consists of heating the contents of the can before tipping, to 160 degrees F. for from one to three minutes. Many of our products were not exhausted because we covered them with a hot liquid. Tomatoes are packed cold and do not require exhausting.

#### Tipping

By tipping is meant the sealing of the vent hole in the cap. After applying soldering flux, the tipping steel is held near the vent and touched lightly with a stick of solder. But very little solder is required to perform this work. If too much is used there is danger of getting pieces of the solder in the fruit.

#### Processing

The sealed cans are now ready to be processed or sterilized. Processing is nothing more nor less than cooking or sterilizing the products in hermetically sealed cans. The cans should be placed in the crates and lowered into the retorts and sterilized for the required length of time as recommended elsewhere in this report.

#### Cooling

As soon as the products have been sufficiently processed, the crates should be removed from the retorts and dropped immediately into a tank of cold water. This checks the cooking process and prevents over-cooking of fruits and vegetables. If this precaution is not taken, the color, flavor, and appearance of the finished products will be injured. The cans should now be tested for leaks. If any are defective, bubbles will be seen raising to the surface. These should be removed and resoldered.

#### Flux

Flux is quite a valuable asset to the cannery. A good supply of this fluid should be found upon the soldering table. Soldering flux is used to clean the soldering irons and for wiping all surfaces to be soldered. Solder will not adhere to the tin unless flux is used. It can be bought from the factory or made by dissolving zinc in commercial hydrochloric acid. The acid is placed in a wooden dish or earthenware jar and zinc added until the acid is saturated. It should be diluted with one to two parts of water before using. A brush for applying the flux to the cans can be made by placing horse hair between a piece of bent tin.

#### Tinning the Irons

It may be necessary to tin the irons several times during the canning season. Anyone can very easily do this by heating the irons, then filing them until they are bright. The irons are now dipped in a zinc solution, then rubbed in a salammoniac to which solder has been added. In a short time the irons will be completely covered with a thin coat of solder. If the irons are not properly tinned, it will be al-

most impossible to do a smooth job of soldering.

#### Methods of Canning

The methods followed by different processors in canning fruits and vegetables vary somewhat. In operating a small cannery one has the choice of any one of three systems. These methods as described in a recent bulletin of the Texas Department of Agriculture, are as follows:

1st. "Fill cans with fruit or vegetables and syrup, brine or water, as desired, then cap, tip, and process without exhausting. This method is largely used by small canning factories but not by large ones. The flavor of goods canned in this way is retained to a greater extent than in any other, but the risk of having spoiled goods is greater."

2nd. "Fill cans as above, then cap, but not tip, and then exhaust before tipping; tip and process. There is less risk than in the first method. Tipping is more difficult and less flavor is retained."

3rd. "Fill cans before stated. Exhaust and then cap, tip, and process. There is not so much of the flavor retained as in the other methods but there is less risk. Most large factories use this method."

In our experiments, we followed the first method almost entirely with good results. We found that the materials kept splendidly if they were subjected to sufficient heat and pressure for the requisite length of time. On the other hand, if our processor did not follow directions exactly and varied the time one-half minute, the loss was noticeable. In operating a steam pressure outfit, I would suggest that the pressure be kept up as recommended, and the recording of the time not begin until the thermometer registers the degree of heat recommended for handling of the various products.

The following table shows the comparative gauge and steam pressure and will serve as a guide when processing:

Gauge Pressure Pounds per square inch.	Degrees of Temp. Fahr.
1	216.
3	222
5	228
7	233
8	235
10	240
12	244
15	250

#### Canning of Fruits

Ordinarily it is a very easy matter to can fruits, for they require less cooking for complete sterilization than do vegetables. The ultimate success, however, depends almost entirely upon careful and conscientious work and attention to details. The proper filling and sealing of the cans, proper sterilization during the process of cooking, and cleanliness, are essential requisites leading to success in the canning business.

The proper selection of fruit for the cans should receive due consideration. The idea that inferior, low grade fruits are suitable for canning, is wrong. Only clean, sound, high-grade products should be used. Fruits of medium size, firm and capable of retaining their color and flavor when canned, are desired.

The general practice, when packing fruits, is to fill the cans to within one-half inch of the top, then add the necessary syrup. During the process of filling, the fruit should not be crushed. The enamel can is best for most fruits as it aids in preserving

the color, flavor and quality of the finished products. One must avoid filling the cans too full for the heat from the soldering irons will discolor some of the fruit and a ring of burnt sugar will form on the under side of the lid.

To make a good syrup, use granulated sugar and pure water. After bringing to a boil, all impurities should be skimmed off as they rise to the surface. The syrup is said to be heavy when the proportion of sugar is large. A light syrup is one in which the water predominates. There are three ways of determining the proportion of sugar in a syrup: (a) by the use of syrup gauge; (b) by measurement; and (c) by weighing. To secure the percentage of sugar when the syrup has boiled one minute, the following table may be used:

1 pint sugar to 1 gill water gives syrup of 40 degrees density.
1 pint sugar to 1/2 pint water gives syrup of 32 degrees density.
1 pint sugar to 3 gills water gives syrup of 28 degrees density.
1 pint sugar to 1 pint water gives syrup of 24 degrees density.
1 pint sugar to 1 1/2 pints water gives syrup of 17 degrees density.
1 pint sugar to 2 pints water gives syrup of 14 degrees density.

If the canner expects to place his products in competition with others in open market, it would be advantageous to find out the trade requirements before canning. In many cases, the trade wants water-packed products and does not care to pay for the syrup added. In a local or private trade, a rich syrup is preferable.

As our products were sold to private concerns, a 24 degree density syrup was demanded. The amount of sugar that was required, per bushel of 24-degree syrup was as follows:

Apricots, 10 pounds.
Sweet cherries, 12 pounds.
Dewberries, 14 pounds.
Loganberries, 12 pounds.
Peaches, 7 pounds.
Plums, 7 pounds.
Pie Cherries, 5 pounds.
Raspberries, 10 pounds.
Strawberries, 14 pounds.

The ripeness of the fruit, as well as the solidity of the pack will effect largely the amount of syrup required.

#### CHARACTERISTICS OF

#### GOOD MEAT.

Beef should be firm and elastic to the touch. It should also be bright red and be well streaked with fat.

Veal should be pink. It is somewhat less firm than beef. If watery and flabby it is too young.

Mutton is a duller red and firm. The fat is white or slightly yellow and hard.

Lamb is pink rather than red and is slightly less firm than mutton.

Pork is rather pale and is somewhat less firm than beef and mutton, and the fat is softer.—College of Agriculture, Nebraska.

Onions should not be allowed to get wet when being harvested, as this roughens the skin and makes them unsightly.

Buy a home canner for the surplus fruit and vegetables. They cost little and soon pay for themselves.

Do not let any weeds ripen in the garden. One weed may produce seed enough to cover a large part of the garden.



"I put this up three seasons ago, and see, its just as good as if I sealed it only yesterday. It's because I use

**Parowax**

Pure Refined Paraffine

in sealing my jellies, jams and fruits. I have discarded those bothersome, unreliable strings and papers. The Parowax way is so much easier and quicker, I am never disappointed by moldy, fermented preserves."

Simply melt the Parowax and pour over jelly glasses. Dip tops of jars in Parowax.

Parowax is guaranteed under the Pure Food Law. Your grocer sells it.

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## Questions and Answers

### APPROPRIATION OF WATER.

Iron Springs, via Lund, Utah.

Utah Farmer:

A neighbor (A) of mine located a well or spring in the hills 5½ feet deep, the water from which is hauled 3 miles and used for culinary purposes. Another Neighbor (B) who is somewhat in partnership agreement with (A) on all farm work goes to location and cuts a trench 2 feet below, getting the seepage from the well already partially developed. Claiming at first that he (B) was merely assisting in developing the water for (A), now claims the trench as his. How about it? Could (B) file on trench and thereby claim entire water supply to the detriment of (A). Should (A) file also at this time although not intending to until he (A) developed a better water supply.

By kindly answering you will adjudge just some matters in dispute.

Very respectfully,

JAS. S. DOONE.

Answered by W. D. Beers, State Engineer.

Your communication addressed to the Editor of the Utah Farmer has been referred to this office for answer.

Your query, first of all, raises the question as to whether the water is really public water subject to appropriation or seepage or percolating water which is inherent to the soil and the property of the soil upon which it is found. You state that a neighbor of yours located a well or spring. A spring, as a rule, is considered a natural underground water channel, and as such the water flowing therein is public water subject to appropriation. A well is generally considered as tapping a seepage flow or collecting the water percolating through the soil, and as such is not considered public water, and therefore it is not subject to appropriation but is the property of the soil upon which it is found.

If the water in question is seepage water, then of course it is your neighbor's property as long as it is on his land. Should his adjoining neighbor, whom you call (B), go immediately below the well and make an excavation upon his own ground—for if he were on (A's) ground he would be trespassing—and dig a trench and thereby dry up (A's) well he would still be within his right and (A) would have no recourse.

If the water in question comes from a spring, then of course it should be filed on through this office before being appropriated, for by doing so (A) is protected by law from having (B) make any kind of a diversion which would effect the amount of water he is entitled to by virtue of his application. If (A) and (B) were in partnership on all farm work and if diverting the water in question were considered part of the farm work, then of course the laws of partnership would apply as to what (A's and (B's) respective rights should be. (B) could not file on the trench that he has constructed, but he would have to file, in case the water is public property, on the source of supply itself, which is a spring. If (A) had already filed on this source then (B) would be in conflict with (A's) application, and (B's) application

would probably be rejected by this office when finally disposed of.

### COMPARISON OF RAIN FALL.

Are we having as much rain and snow now as we did 10, 20, or 40 years ago?

Answered by A. H. Thiessen, Section Director, Weather Bureau.

Studies of precipitation have been made all over the world, and where the records have been long, the result has been that there has been no change in precipitation during historical times. We have good records for the precipitation in this state from 1892 to the present time, and a computation shows that the average precipitation for the state as a whole from 1892 to 1901 was 11.00 inches, while from 1905 to 1914 it was 14.70 inches.

The longest local record we have is at Salt Lake City. During the decade from 1875 to 1884 the rainfall averaged 16.96 inches; from 1892 to 1901, 15.51 inches; and from 1905 to 1914, it averaged 17.41 inches.

The feeling that people have that climate has changed during their lifetime is due to the fact that they trust to their memories and do not keep records. The people remember the unusual, as heavy rains or snows and low or very high temperatures.

Ogden, Utah.

Utah Farmer:

I have a few acres of land that I have been using for potatoes. The ground has become diseased. What crop shall I plant next year and how long before I can use the ground again for potatoes?

J. R.

Answered by Dr. F. S. Harris.

You could plant any of the ordinary crops such as sugar beets, alfalfa, or corn without danger. It would be better to leave the land three or four years before raising potatoes on it again.

### HOW TO KEEP SEED PEAS.

Sandy, Utah.

Utah Farmer:

Is there any practical way of keeping seed peas over winter free from weevil, if so please state through the paper? Last year I had a lot of garden peas, there was not a worm or weevil in them when I threshed them but when I wanted to plant them this spring they were full of weevil.

I kept them in a cotton sack hung on the wall on the porch. Thanking you in advance I am

Respectfully yours,

FLANS R. PETERSON.

Answered by Harold R. Hogan.

To control this weevil in pea seeds, I would suggest the use of one of the two following methods:

First, treatment with carbon bisulphide in the fall. After the seeds are placed in a tight sack, which is securely fastened at the top, the sack may be placed in a barrel, and a dish of carbon bisulphide (about a quarter of a pound) should be placed on top of the seed and allowed to evaporate. This barrel must be absolutely tight and closed on top with a lid if possible. If not, some boards and gunny sacking will perhaps answer the purpose. Fumigate the seed for at least 24 hours. If during the winter time you notice any symptoms of weevily seed, you should fumigate a second time.

Do not bring fire near the carbon bisulphide as it is highly explosive.

The second method is the hot water treatment. Fill two tanks with water. Bring one tank to temperature of about 95 to 100 degrees, the other to 135 degrees. Immerse the sack of seed into the tank of lesser temperature so as to get the seed about the right temperature, then transfer to the water at 135 degrees and keep it at this temperature for ten minutes.

Neither of these treatments will injure the germination quality of the seed.

### DRY COWS UP TOO EARLY.

Utah Farmer:

We have a very nice Jersey Cow about ten (10) years old two or three years we milked her right up to her freshing. We were told this method was not good, better to dry cows up 3 or 4 weeks before calving. So this time we were very careful to dry "Daisy" up. But to our surprise about the day the calf was due we had unmistakable evidence that the matter had been postponed for 9 months or more.

What can we do to bring Daisy back to her milk?

Respectfully,

J. L. B.

Answered by Dr. W. E. Carroll.

It will be very difficult to get your cow back to milk after having once dried her up. The only possible way would be to give her plenty of green feed and attempt milking her regularly, though I question very much whether this method will succeed.

It is rather difficult at times to tell when a cow is in calf. If she shows no signs of being in season, that is usually taken as the test. This, however, fails at times. A record of the time the cows was bred is very necessary but it does not help if the cow fails to get a calf or show signs of heat after.

### KEEP THE WEEDS OFF

#### PUBLIC PROPERTY.

Salt Lake City, Utah.

Utah Farmer:

I do not know if we have a weed law in this state or not, but take it for granted that we have not, as everything points that way very clearly.

It is almost lamentable at this season of the year to watch the condition of our roadways, railroad tracks, canal banks as well as streets in most of our cities and towns in this state, that is from the standpoint of weeds; almost without exceptions they are filled with weed such as Russian thistle, cockle burs, foxtails and various tumble weeds etc., which will soon ripen only to fill neighboring farms with their noxious seed for next year, so much so that there is but small incentive for any farmer to make any effort to keep down weeds on their property. To me it appears as though it should not be necessary to have a state weed law to induce officials of state and county roads, railroads, canal companies, as well as city councils and town boards to deal with this problem. The value to communities of having such properties properly cleaned up of weeds would be immense, it would set an example for individuals of the greatest value and be a strong encouragement for everybody to make proper effort to keep their farms and property clean. I hope you will make an effort in your paper to emphasize this point. Money spent in this way before seed ripens



## It's Threshing Time --How to Get More Power From Oil Engines

When the combustion chamber of an oil engine is properly filled with air and the right quantity of gasoline or distillate to be ignited is present, the amount of power produced by the ignition depends on the heat energy of the distillate. The expansion of the air occasioned by the heat forces the piston into action. The higher the temperature the greater amount of power is produced.

## Number One Water White Engine Distillate

is made on this theory. It is heavier than ordinary gasoline—but in reality is a heavy gasoline. In each ignition, with the same quantity of "Number One Water White Engine Distillate," more heat energy is obtained, which means more power at less expense. "Number One" is specially made for traction and stationary internal combustion engines.

It is the one oil that will not foul the ignition system and will leave no carbon deposits on the valves, piston or cylinder wall. The price per gallon in steel drums F. O. B. Salt Lake City, is 10 cents. We will be glad to furnish samples on application.

## Utah Oil Refining Co. Salt Lake City

### BARGAINS.

One 16-Horse Steam Tractor.  
One 20-Horse Gasoline Tractor.  
Have been used for short time, but are in first-class condition.  
Write for price and details.  
S. PETERSON & CO.,  
210 So. 6 West, Salt Lake City

Harry—"I suppose if I kissed you, you would never speak to me again?"  
Harriet—"Why do you always look on the dark side of things?"

"I am going to sell kisses at the Charity Fair. You'll buy some won't you?"

"I guess so," said the young man.  
"Are you distributing any samples?"



would be well spent indeed, and give employment to many men who are out of work and sorely in need of employment.

Yours truly,  
R. Michiesen.

The Utah Farmer has been trying to show the benefits that will come from keeping the farms and public highways free from weeds. We are glad to see others interested. When a great many people become converted to this movement, of killing the weeds, then the fight will be effective. It must be a united effort to get the best results. Some day we will learn that it pays to fight the weeds, systematically work together to kill the weeds.

We would like to hear from others on this important question. Write and give us your ideas on the weed question.

Answer to W. H. Ashby, Holden, Utah.

The only practical way of ridding a granary of weevils is by fumigation. In order to have this successful the storeroom or granary must be tight. No holes or cracks should remain open. After the granary has been made practically tight, fumigate with carbon bisulphide at the rate of 10 pounds per thousand cubic feet. The liquid should be poured into pans and placed about the room. About one-half pound shall be placed in each receptacle. Close all doors and windows tightly, stopping up any crevices that remain with pieces of gunny sack. Allow fumigation to extend over a period of 36 hours. Remember this gas is highly explosive and you must not bring a spark, as from a glowing match cigar, within the vicinity. The gas is not dangerous to human beings unless one remains in the room with it quite a while.

H. R. Hagan.

#### THE ORIGIN OF THE TOMATO.

Edward Albes.

Excepting our scientists, there are comparatively few people in this country who ever stop to think of how many important products that now minister to the health, sustenance, and pleasures of mankind were added to the world's supply by the discovery of America.

"The greatest febrifuge known to-day—quinine—came into existence because the Incas of Peru had discovered the medicinal properties of the bark of the Cinchona tree; the leaves of the coco plant, a South American product, have served to alleviate pain the world over by their essence—cocaine; Indian corn, or maize, was unknown to the Old World before it was found to be the great food staple of the Americas; Irish as well as sweet potatoes had their first home in the New World; the delicious concoction known as chocolate, serving man as both food and drink, had been known for centuries by the Incas of Peru and the Aztecs of Mexico before the Spaniards found it in these countries and introduced it into Europe; tobacco, whose rings of aromatic smoke now circumscribe the earth, was added to man's pleasures by the Indians of America. Many other products might be enumerated, but among them all perhaps none ministers more delightfully to the palate of the modern epicure than does the tomato, that luscious, succulent, refreshing vegetable fruit which gratifies the eye with its beauty of color and form, stills hunger with its

meat, and assuages thirst with its juice."

The name "tomato" seems to be of Aztec origin, given as *tomatl* by some authorities and as *xitomate* by others, and still persists in some few of the older Mexican town names, such as Tomatlan, Tomatepec, etc., but the general consensus of opinion among botanists seems to be that the plant and its culture for edible purposes originated in Peru, whence it spread to other sections of the Americas. It is certain, at any rate, that it was known and cultivated for its fruit centuries before the Columbian discovery.

That the cultivated tomato was known to some of the European botanists over 360 years ago is evidenced by the fact that two large varieties were described by Matthiolus as early as 1554, but for many years it was only in southern Europe that the value of the fruit for use in soups and as salad was recognized. It was quite generally used in Spain and Italy during the 17th century, but in England and in northern Europe generally the plant was grown only in botanical gardens as a curiosity and for ornamental purposes. It was seldom eaten, being commonly regarded as unhealthy and even poisonous. This belief probably arose because of the close resemblance of the plant to its allied relative the nightshade, or belladonna, and had, of course, no foundation in fact. It was not until the early part of the 19th century that the tomato came into general use as a food in northern Europe and even in the United States. Since about 1835, however, the use and cultivation of the vegetable has grown to such an extent that it has now become one of the most important of our garden crops.

When a successful process of canning the fruit was evolved the tomato industry at once assumed large proportions. It was found that for all cooking purposes the canned fruit was as good as that fresh from the vine, and as a result the tomato has become a staple food the year round, and millions of dollars are now invested in canning factories in the United States, whose chief output consists of tomatoes. From statistics compiled by the National Cannery Association for the year 1914 it is learned that among the tomato-producing states Maryland ranked first with a production of 5,850,000 cases of canned tomatoes; Delaware second, with 1,335,000 cases; Indiana third with 1,295,000 cases. The total production for the whole country amounted to 15,222,000 cases of tomatoes and about 5,000,000 cases of tomato pulp (used in making catsup, sauces, soups, etc.). The total was therefore over 20,000,000 cases of 24 two-pound cans each, or an output of 480,000,000 cans, weighing 480,000 tons, and having an approximate value of \$28,000,000. If these cans were placed one on top of the other, the resulting column would be very nearly 37,000 miles high, or if placed end to end in a row would encircle the earth one and half times at the equator. These figures deal only with the canned product of factories keeping accurate statistics. When we remember that perhaps twice as many more are eaten raw and canned by the thrifty housewives and Girls' Canning Clubs we may get some idea of the importance in our national economy of the garden tomato.

Keep the seed pods off sweet peas and other flowers if you want them to be wanted in perfection.



Pauline Marriott



Ruth Huhl

These young ladies made records in the Intermountain Typewriting contest that has never been equalled by a student from any other school in America.

The students of Henager's Business College have won all cups and medals for the past three years. If you want to be a winner you should attend our school.

School is in session all the year and new students may enter at any time. Positions are guaranteed to all graduates.

WRITE FOR FULL INFORMATION

## Henager's Business College

HENAGER COLLEGE BUILDING  
SALT LAKE CITY, UTAH.

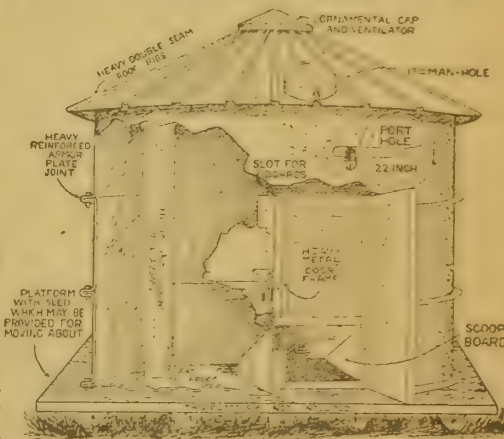
## GET THE "BIG PRICE" FOR YOUR GRAIN

Farmer Friends, Listen to This

Last year the minute grain was harvested the majority of farmers let go of their crop. Let a young fortune, in many instances slide through their fingers. A couple of months after they had sold their grain the price climbed to nearly double what they received when they sold. But farmers are wiser this year. Once caught twice shy! This year they'll store their grain in a Columbian Grain Bin. They'll hold their crop until the "Big Price" comes round. Then they'll sell. "BUY A BIN" MOVEMENT SPREADING

You farmer friends of ours who haven't yet bought your bin, make haste and secure it. The cost is little. That is, if you buy it from us. Why? Because when grain prices will pay for it. Write today for prices and details.

THE GREAT COLUMBIAN BIN. You've heard about this bin. America's largest metal bin manufacturer makes it. It's the best.



The Columbian Bin—Write for Descriptive Folder and Price.

rat proof, storm proof. Heavily galvanized so it won't rust. Built extra heavy and strong throughout. A postal will bring you full particulars.

#### THE LOWEST PRICE OBTAINABLE

Remember in buying a bin, this is the house to buy it from. We're the only dealer in the Intermountain District of Salt Lake City. Down where the rents are lowest. We have no big overhead expense. We don't have to make big profits to line the pockets of the middlemen. We sell direct to you. Write today for prices and details. We'll send you a folder and price list.

S. PETERSON & CO.  
210 SO. 6TH WEST, SALT LAKE CITY, UTAH





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Entered as second-class matter in the Postoffice at Lehi, Utah.

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 LEHI, UTAH.

Subscription Price - \$1.00 per year

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 James M. Kirkham, Manager  
 Kirkham Building, Lehi, Utah

#### ADVERTISEMENTS.

We believe that every advertisement in this paper is backed by a responsible person. We guarantee the reliability of advertisers, but we will not undertake to adjust trifling differences between subscribers and advertisers. This guarantee holds only when written complaint is made to the publisher within one week from the date of any unsatisfactory transaction, accompanied by proofs of swindle and loss and within one month of the date of the appearance of the alleged deceptive advertisement in the Utah Farmer, and the subscriber must prove that in writing to the advertiser he said: "I saw your advertisement in the Utah Farmer."

#### OFFICIAL ORGAN

Utah Horticultural Society, Utah State Dairymen's Association, Utah State Bee Keepers' Association, Bear River Valley Farmers' Protective and Commercial Association, Agricultural College Extension Department and Utah State Fair Association, Utah-Idaho Millers' and Grain Dealers' Association.

When you ask for a change of address always give OLD and new postoffice address.

The feeding of alfalfa to livestock is the most profitable way to dispose of your alfalfa.

Some people get results if only encouraged, but give me the man who does things in spite of all kinds of opposition.

Even at harvest time when you are very busy it pays to read the advertisements found in the Utah Farmer. Only reliable firms are sold space, dishonest ones are not permitted to come in.

Provide some shade for your animals. What would you think of being shut up in some yard or lot, these hot days, with out some shady place. If you do not provide shade you are unkind and you loose money. Your animals will not grow under adverse conditions. It will cost but a very little time and material to provide shade for your animals.

#### PREMIUM LIST FOR STATE FAIR

The annual Utah State Fair will be held in Salt Lake City, September 27 to October 6 inclusive. This is the thirty-seventh exhibition of the Utah State Fair Association. The premium list is now being mailed. There will be twelve different departments, Horses, Cattle, Sheep, Swine, Poultry, Horticulture and Floriculture, Agricultural and Dairy Products, Merchants and Manufactures, Fine

Arts, Educational, Womans Work, Agriculture Machinery and Implements and Minerals. To these is added the Speed Department. The price of admission will be 25c adults and 10c for children under 10. Admission to the Coliseum will be 25c adults, children 10c. The grand stand 50c bleachers 25c. There will be a number of amusement features to entertain the crowds who visit the fair.

If you fail to receive a premium list and want one send a post card to the Secretary of Utah State Fair Association, Salt Lake City, Utah.

#### WE WANT YOUR IDEAS.

Many of our readers have new suggestions and new ideas, or some method they have pursued in being successful. You have some experience that has happened on the farm. By some certain method you have obtained certain results, why not tell this to others.

You take the Utah Farmer and when you have read it and found in it some helpful suggestion, you have wasted your time unless you make some use of it.

Every farm paper that is worth while, has a public service to preform. When you read some thing good in the Farmer tell your neighbors about it, in this way you are aiding in the public service we are trying to extend.

When you send us some short story of how you have accomplished certain things or given us some new idea, or in some manner aided in making the publication you read more valuable and helpful to your neighbors, you have helped in that public service.

Don't you think you would like to help in this service?

#### IMPORTANT TO LIVE

##### STOCK MEN.

It would seem that some of our live stock men did not understand the notice that was given in the Farmer a little while ago. There is an organization in the state called "Utah Livestock Breeders Association," whose purpose is to help promote the livestock industry in our state. Dr. W. E. Carroll of the Experiment Station, Logan, Utah, is secretary and is trying to secure a complete list of all the men who are producing live stock. When this list is completed it will be the desire of the association to get buyer and seller together. Many inquires are received for purchasing certain kinds of animals and often the place to buy them is not known. With a complete list of all livestock men in the hands of the secretary you can see what a big help he may be to all.

If you have not already sent in your report, please do so at once state the class of livestock, whether horses, cattle, sheep, or hogs; the breed,

stating whether they are pure bred or grade, the number of males and females kept, and the number of stock for sale.

This is more important to you than any one else because of the service you will receive. Attend to this matter at once and write to Dr. Carroll giving him the information asked for above.

#### SELECT SOME CHOICE SEEDS.

At harvest time some farmers select their seeds and with great care put them away for spring planting. There is another class of farmers who sell the best of every thing they produce. To produce the best of everything and keep the best for seed is the ambition of every successful farmer.

The best is always the easiest to sell. The buyer demands the choice of everything, and to get it will pay a premium over the prices the less desirable will command. This is accepted by some as a just and reasonable inducement for selling the best and keeping the poorer quality.

Every one should protect their own interest by saving the very best seed they can produce, if they are not able to buy better seed than they can raise. You cannot expect to produce a very good crop of anything from poor seed. Soil, climate, seed bed, cultivation and other things may have an influence on your crops but you must have good seed to start with if you expect to raise the best.

There is but one way to keep up a steady and constant improvement on the farm, and that is by a careful and intelligent selection of the best of everything produced and the regular introduction of improved seed.

#### OUR WHEAT CROP

As the harvest proceeds the estimated yield of our wheat crop goes higher. In many parts of the state the yield is going to be more than first estimated. In some other districts the wheat is not up to the standard of last year. The spring rains made the stocks grow and then the hot dry spell made it hard for the wheat to fully develop, even in these districts however the yield is going to be good. Some of the irrigated wheat is so heavy it is hard to cut and harvest it. With the hope of securing a good price for his wheat the farmer planted more acreage this year than for a long time. To secure a good price care must be exercised in marketing the wheat. If the market is flooded, down will go the prices, as far as local prices are concerned. The amount we send to Europe will effect the price to a certain degree. The coast market and shipments to the Orient will have some influence. There is a rule however that every farmer can follow to a certain degree and that is not to sell all your wheat at har-

vest time. We can not hope to see the same condition this year as last. Many buyers made a fortune in purchasing wheat and holding for the big advance in price that came later. Wheat is selling now for too high a price to expect any wonderful advance. Make some investigation as to other markets than your local market to protect your self in securing the best possible price for your grain.

#### WHAT WE HOPE TO LEARN

##### FROM THE FARM SURVEY.

Eight men are now engaged in making a survey of farms in Salt Lake County. This work is being done by the United States Department of Agriculture and the Utah Agricultural College co-operating. The purpose of this survey is to analyze 500 Utah farms from the stand point of their money making ability.

It will be determined why one makes a large income or why one makes a small income. This small or large income is not entirely dependent upon the farmers industry, character, training, nationality or the many other factors which people usually attribute success or failure to. Success in farming is due in most cases to a well organized farm, a failure is due to a poorly organized farm. A farm is just a machine and a farmer can not manufacture an income unless he has a good machine and in good working order. The parts of this machine include stock with their products, money crops, such as sugar beets, potatoes, and hay and milk and other dairy products.

Sometimes the farmer fails because he has not got a money crop or has too much money crop or too little money crop. Too much money crop is illustrated by the failure of the specialized peach business in certain parts of Utah this year. Some times a farmer has too few live stock of the right kind some times too many live stock of the wrong kind. The amount of money crop or live stock desirable would depend upon how his business is organized, that is, how much labor he has, how much machinery he has, how many acres he has. Some times a farmer is hastened to failure because he has horses instead of mares on the farm, thus getting only labor from his animals instead of labor and colts. Some times he has enough labor and machinery to take care of twice the sugar beets he now has in. The handling of the extra acreage would cost him very little compared with the cost of handling the first acres. These are among the many things the farm survey will attempt to discover for the benefit of the Utah farmers.

The Utah Farmer will explain some of the essential features of this survey from week to week as the survey progresses in the State.



# Smuts---Kind and Control

By Dr. Geo. R. Hill, Jr., of U. A. C.

A great majority of the wheat growers in Utah this year are paying a special tax for the privilege of growing grain. So are many farmers for growing oats. In some cases the tax is only a few percent of the crop, and in some cases the toll is 25 percent. This percent could have been saved. It could have been turned into clear profit. Not one of the scores of fields visited recently is free from this toll.

What can we do about it? Will we add 10 percent to 25 percent to our profit on oats and wheat next year? How can we do it? When is the time to do it?

The cause of this loss is a fungus organism which lives on the inside of the wheat plant, and remains so completely hidden there that we cannot find any trace of it until the wheat heads out. Then this organism concentrates all of its energies in the young head of wheat. It eats up the young flowers and in their place a black sooty mass which we call smut is formed. The head turns to smut because the wheat plant has been infected throughout its life by this fungus organism. Seed rarely gets a chance to form on smut-diseased plants.

There are two kinds of Smut. The one to which we have just referred appears on the head just as the plant is heading out. It is called "Loose Smut," because it appears as loose sooty masses all over and all through the head. The other smut is called "Stinking Smut or Covered Smut." It is called Stinking Smut because it is so very irritating to the nose at threshing time when the spores are set free. It is called Covered Smut because the black spore masses are covered and hidden by the glumes or chaff of the wheat head until the wheat is threshed. Then the smutty kernels are broken open, and the smut spores are set free. The fan in the machine blows the tiny black spores over the grain that is not smutty. The spores stick to the wheat kernels and are ready to cause infection as soon as such wheat is planted. Stinking smut lives over winter on the surface of the wheat kernels. It can therefore very easily be killed by soaking the wheat for ten minutes in a formaldehyde solution, one pint of formalin to 40 gallons of water, or by soaking it in a solution of blue vitrol. No thrifty farmer will allow stinking smut in his wheat. It is easily killed at planting time.

Loose Smut lives over winter on the inside of the wheat kernel. It is NOT killed by the formalin treatment. That is why our farmers all over the state, in practically every irrigated grain field, are raising the disease this year. It is hard to eradicate. This year from 10 percent to 25 percent and in some cases 40 percent of the crop has been destroyed by it. Loose Smut appears as black sooty masses of spores just at the time the wheat is heading out and coming into blossom. In order for a wheat seed to be formed, the wheat flower must be fertilized. The small yellow pollen grains, as small as fine dust, are carried from one wheat flower to another by the wind. They fall between the green chaff-like glumes, and drop onto a white feather like organ called the stigma. This organ is sticky, and the pollen grains stick to it, and in a few hours they germinate

and grow down into the center of the flower and effect fertilization. Loose Smut spores are about the same size as the pollen grains. They are produced at the same time, as the pollen grains and are carried all over the field by the wind in just the same way. They fall among the wheat flowers and finally onto the stigma just as the pollen grains do. And they germinate and grow down into the flower just as the pollen grain does too. The little fungus grows down into the center of the young wheat kernel, and then it stops growing. It remains dormant on the inside of the kernel until the seed is ripe. When the wheat seed is planted the smut fungus grows up into the stem and leaves of the plant. It lives there and grows rapidly upon the food prepared by the host plant, and when the wheat head is formed, the fungus centers all its energies there and produces another mass of sooty spores, just in time to infect the new wheat blossoms. **Loose Smut Can Be Controlled.** It can be eradicated from our fields. The entire loss can be saved. **HOW?** There are two methods.

1st. By planting clean disease-free seed. This can only be done by getting seed from a field which is not infected by the disease. Such fields are very rare, but there are some in which the disease is very scarce.

2nd. By killing the disease by soaking the seed in hot water. This is very difficult to do, because if the water becomes too hot the seed will be killed, and if it is not hot enough, or kept in long enough, the fungus will not be killed. The seed should be heated to 130 degrees for ten minutes. Treating grain in tubs by adding hot water when needed has not proven very satisfactory. It is much better to use live steam, as at some creamery. This is another place that your County Farm Demonstrator can be of great assistance to you. At least treat enough seed for a seed plot, perhaps an acre. This treated seed should be planted in a plot by itself and at heading time should be gone through carefully. All infected plants that escaped the hot water treatment should be pulled up and removed from the field and burned, to prevent these smut spores from scattering and infecting the rest of the field. The second year you will have enough of disease-free wheat for seed for the entire field. Then with care, it can be kept clean. Is the additional 25 percent worth working for? It is yours, and it will take but a little careful thorough work to get it. Next year let us all be thrifty farmers.

## Do Not Let The Weeds Go To Seed.

It will save you much work if you do not allow the weeds on your farm to go to seed.

Now is the time to become familiar with the weeds growing on your farm. Do not wait until a weed has infested a large area before you find out what it is—whether it is a bad weed or not—or before you have discovered some method of eradication. Do something before the weeds go to seed.

This is the time when the weeds steal march on the farmer, if he is not on the watch. The many thousand of seeds will be scattered all over your farm if you don't do something now.

## Grain Bags and Twine

We carry a complete Stock of All Kinds of Grain Bags, New and Second Hand

For Wheat, Rye, Barley, Oats, Potatoes

Can save you money whether you want 100 or 100,000. Samples and Prices on Application

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Grain, Seeds, Bags, Twine, Poultry Supplies, Incubators, Hay, Etc.

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JERSEYS

## Ballamoar Farms

BERKSHIRES

Richmond, Utah.



Bessie Ballamoar and Litter.

SPRING BERKSHIRES

The best pigs from twelve litters by

UTAH'S CHAMPION BOARS

Rival's Premier Master 139600 and Ames Rival 24th 153236 and out of prize-winning sows, ready for shipment at \$18 to \$30 each. Pairs and trios not related can be furnished.

Six well bred young Jersey bulls for sale.

CAINE LIVE STOCK CO., Richmond, Utah.

## AGENTS WANTED

A representative wanted in every county of Utah, Idaho, Wyoming, Nevada and Montana, to sell Ready Roofing, Asphalt Shingles, Roof Paints, etc., selling direct to the consumer. Best of references required. Good proposition for steady worker. Write to "SM" care of Utah Farmer, Lehi, Utah.

IF YOU HAVE NOT RENEWED YOUR SUBSCRIPTION TO THE UTAH FARMER RIGHT NOW IS THE TIME TO DO IT. TO EVERY SUBSCRIBER WHO PAYS ONE YEAR IN ADVANCE WE WILL GIVE FREE ONE OF THE DELUXE SEWING SETS, MAILED POSTAGE PAID ON RECEIPT OF REMITTANCE.



## Keeping Qualities Corn Meal

Old Fashioned Stone-Ground Meal  
Spoils Sooner But Has Better  
Flavor Than Modern Roller  
Milled Meal.

Investigations on the keeping qualities of corn meal, recently completed by the experts of the Department of Agriculture, show that stone-ground meal, which on account of its rich oily flavor is so desired in the palatable muffin, hoe-cake and pone, spoils much more quickly than meal made in the modern mill by the roller process. For this reason the stone-ground meal should be eaten as soon as possible after milling. In this respect it is like milk and cream which are usually consumed within a few hours after being produced, and which under the most favorable conditions can be kept in their natural state for only a short time. The roller mill meal is, in its keeping qualities, more like butter which can with proper care be kept in good condition, not indefinitely, but for a reasonable length of time.

In those sections of the country where it is customary to take corn to the mill and carry back the meal, frequent trips should be made to the mill and only small quantities of corn taken at each trip so that the meal can be used up in a short time after being milled.

The palatable, characteristic taste of the stone-ground meal is largely due to the oil contained in the germ of the corn. As the whole kernel of corn is ground in the stone or French burr mill this oil is pressed out in the process and imparts its flavor to the meal. In the roller mill process the germ is taken from the corn before rolling by a machine called a degerminator, and but little of the oil gets into the meal. The germ, if allowed to remain in the meal, causes it to spoil quickly. So that very thing that imparts the desirable flavor to the meal will also injure its keeping qualities. In some cases in stone ground meal the germ is removed by bolting after grinding. This improves the keeping quality over that of unbolted meal but does not make it equal in keeping qualities to the meal made by extracting the germ before milling.

The term "water-ground" meal applies to the product ground by stones without regard to whether the motive power is water, steam or electricity. At one time nearly all stone grinding mills were operated by water power while roller mills were usually operated by steam, and so the term "water-ground" was used to mean the same as "stone-ground." In later years, however, steam and electricity have almost entirely displaced water as a motive power in mills. It is the milling machinery, and not the source of power, that determines the character of the meal that may be produced.

The keeping quality of corn meal is also greatly affected by heat and moisture. Other things being equal the drier the meal the longer it will keep. It is the custom in larger mills and in some smaller ones to artificial ly dry the meal after milling. In wet sections of the country or in wet weather anywhere, dried meal will very quickly absorb moisture from the atmosphere. Any kind of corn meal will keep much longer in cold weather than in warm weather. It

should, therefore, be stored in a dry, cold place.

## Market Prices

### Local

The quotations given below are what is being paid f. o. b. Salt Lake City. We find that a difference of 5c to 10c a hundred is paid by the millers or grain buyers in other parts of the state.

Wheat, soft white—\$1.45 cwt.  
Wheat, Turkey Red—\$1.50 cwt.  
Oats—\$1.45 cwt.  
Barley—\$1.10 cwt.  
Rye—\$1.10 cwt.

### Hay

Alfalfa—\$10.00 ton baled.  
Eggs—\$6.00 case 30 dozen.  
Butter Creamery 29c.  
Butter Ranch 25c.

### Chicago Market.

New arrivals of wheat have given the prices a downward swiny.

Wheat—No. 2 red, \$1.15 5-8@116¼;  
No. 2 hard, \$12.6¼@1.27½.  
Corn—No. 2 yellow, 82@82½; No. 4 white, 81c.

Oat—No. 3 white, 59@62c.

### LIVE STOCK

#### Kansas City Market

Hogs bulk of sales. Hogs, lower; bulk, \$6.75@7.30; heavy, \$6.50@6.95; packers and butchers, \$6.95@7.30; light, \$7.10@7.25; pigs, \$6.50@7.00.

Cattle—Steady, prime-fed steers, \$9.50@10.00; dressed-beef steers, \$8.00@9.50; western steers, \$7.00@9.50; stockers and feeders, \$6.25@8.50; bulls, \$5.25@6.75; calves, \$6.00@10.50.

Sheep—Higher; lambs, \$8.40@9.00; yearlings, \$6.75@7.50; wethers, \$6.70@7.00; ewes, \$6.25@6.85.

#### Portland Market.

Hogs—\$7.00@7.15.  
Steers—\$7.00.  
Cows—\$5.25.  
Lambs—\$6.25.

### CULTIVATION INSTEAD

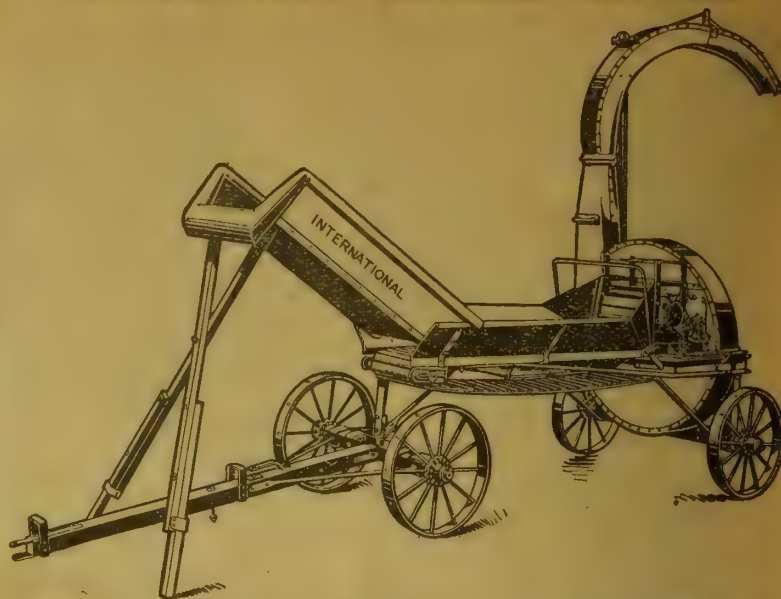
#### OF IRRIGATION.

Man can not control the amount of moisture that falls but he can control the amount of cultivation that he gives his soil. By cultivation he may more nearly approach the benefits derived from ample precipitation than through any other method.

This has been a dry year; one that has given ample opportunity to test the Gospel of moisture preservation through consistent cultivation. Has the land which was plowed deep and kept open with a sponge like tendency of absorbing all the moisture that fell, from which the weeds were kept cleared; and over which a fine blanket or mulch was kept that prevented the moisture below from evaporating produced a half-matured, wilted, stunted crop? Compare the crops on such land with those on uncultivated lands or lands that have received partial cultivation and decide which is the better process. Now is the time to take notes, compile data, make comparisons, and draw conclusions. Practically all the West has suffered from lack of moisture, but the careful farmer who had properly cared for his ground previous to and after planting has suffered less than his neighbor who planted without taking any heed of the principles on which successful farming is based.

Plow the land in the fall. Plow it deep. Keep it loose. Do not let it pack or bake. Do not let it crack and thus let all the moisture that is stored escape. Keep it clean, for weeds as

## INTERNATIONAL ENSILAGE CUTTERS



International ensilage cutters grow more popular every day. These are some of the big points on the INTERNATIONAL.

1. There's the famous special concave knife, with inward shear cut, which does most of the cutting near the shaft where the power is greatest.
2. The handy knife grinder that is always on the machine, grinds one of the two sets of knives while the other is working. It's a water stone, leaving the temper in the knives.
3. Perfect adjustment of knife blades to cutter bar can always be maintained, saving power and doing good work.
4. Heavy channel steel frame, trussed, hot riveted, so that working parts can't get out of line.
5. Self-feed keeps cutting always even; silage is cut in lengths from three-eighths inch to over an inch.
6. Blower pipe is adjustable to any angle; silage may be delivered to a silo of any height.
7. Full equipment of safety devices.

These features make the INTERNATIONAL the best to buy. Come in and see the machine or write us for full information.

**International Harvester Company of America**  
218 S. Sixth West St. Salt Lake City, Utah

well as useful crops absorb moisture. If irrigation is practiced, stir the soil when possible after watering and thus preserve the 50 or 75 percent that goes off in evaporation. Late spring plowing of land covered with vegetation increases the loss of soil moisture. This land should be plowed early so as to kill the growth before it has consumed the moisture content of the soil. The ground should be carefully watched. Different kinds of soil need different treatments. Cultivate the ground, for cultivation conserves the much needed moisture and insures good crops. If any one be suffering because of the drouth, now is the time to get busy preparing the soil to hold all the water that reaches it for by that method a similar occurrence can be avoided.

### CARE OF GROWING STOCK.

The usefulness of a fowl when mature, depends largely upon the care it gets while growing.

It is not best to crowd them by feeding highly stimulating foods, but it is important that they be kept growing steadily.

Growing stock must have plenty of roosting room well ventilated, free from lice and mites, and good range with plenty of green food and some shade. Shrubbery, growing corn, sunflowers or any other natural shade is best, but if they are not available, some form of shade should be provided so that the chicks can run in out of the hot sun.

Chicks drink a great amount of water and it should be kept before them, clean and fresh in clean founts all the time. Untold damage can result from thirst and many diseases are the result of filthy drinking founts. Feed clean feed. It is not a good practice to over feed.

A good growing ration for chicks after they are seven weeks old is: Equal parts whole wheat, cracked corn and hulled oats, or hullless barley, or both if available. A little millet, buckwheat and kafir corn can be added to good advantage, if not too expensive.

This mixture should be fed in litter so that the chicks will be required to work. Work is a strong factor in producing vigorous, thrifty fowls.

A mash should be kept before the chicks in feeding hoppers.

#### Mash

Wheat Bran	50 lbs.
Ground Oats	10 lbs.
Wheat Meal	15 lbs.
Beef Scrap	5 lbs.
Granulated Bone	5 lbs.
Charcoal	1%

All ground very fine and thoroughly mixed.

For chicks up to seven weeks old, a good commercial chick food is good, if put up by reliable dealers. If mixed on the farm, great care should be exercised to avoid the use of moldy grains. A mash the same as for chicks over seven weeks old is good only that the beef scrap should be eliminated.—Pren Moore, Poultryman.



## Attempted Fraud

Dr. W. E. Carroll.

A contemptible piece of business was attempted recently by a professed horseman in a nearby locality. He attempted to register grade colts to purebred percheron mares which had not foaled during that season. The strong arm of the Percheron Society of America immediately reached out into the section and made an exhausted investigation of the matter. This resulted in the attempted fraud being frustrated. The guilty party will be dealt with at the September meeting of the Board of Directors of the Society.

Such an attempt is not only a violation of the rules of the Percheron Society of America, but it touches every percheron breeder and the horse industry in general, especially in the section where such a thing might be done. If the attempt had been successful, a grade colt would have been registered. Some one then would have purchased an inferior animal; one which had no prepotency or power to transmit any good qualities. The mare bred to such a mongrel would better remain unproductive.

Such an act suggests one danger in the horse breeding business. Such things make it imperative that in buying horses for breeding purposes, a person be careful in looking into the honesty of the salesman. Such an attempted fraud is of the lowest type of rickety and should not be tolerated for one moment. The fullest extent of the law should be dealt out to the person who has so little regard for principles of honesty. He is indeed a menace to society.

Any breeder who suspects "crooked work" in connection with such matters should immediately report the same to the Percheron Society of America, Chicago, Ill., so that the business of breeding purebred animals can be protected and run only on honest methods.

### NECESSITY FOR HOME CANNING.

It is a lamentable fact that over fifty percent of the natural production of the average orchard and garden is being wasted in the American home for want of some simple way of taking care of these products. The little portable canners will save most of this waste and encourage more and better canning at home, as all the members of the family will take an interest in the work, or at least offer their assistance.

Every well regulated farm home should have a canner of some description, if nothing more than an ordinary wash boiler. It is quite as important as the milk separator or fanning mill. Every child should be taught the art of canning, either at home or in the canning clubs, and every school should have a canning outfit as part of its equipment.

The day is not far distant when every family will have its canning and preserving days as it now has its harvesting and threshing days, when all the members of the family will put aside other work and attend to the canning of fruits and vegetables for winter use.

"You must promise me one thing before I will consent to marry you."

"Anything!"

"You must spend as many evenings with me after we are married as you do now."



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## Plans For Agricultural Club Work In The High Schools 1915-1916

J. C. Hogenson, C. L. Anderson.

During the school year 1914-1915 the agricultural club movement in Utah made progress of a very substantial kind. Before the end of the year clubs were organized in almost all of the larger High Schools and Academies of the State, and in many of the smaller ones. Some very useful work was done by the boys and some excellent lessons learned with regard to next year's work.

It is felt that High School club work differs from that conducted for grammar grade students in a number of ways. One of the most important differences consists in the fact that most of the High School club work must be done during the school year, while that of the grammar grade boys must be done in the summer. This general tendency will have an important influence on the nature of the projects advocated for the clubs.

Probably the most popular project introduced last year was the Milk Testing and Record Keeping, Dairy Project. Every club that introduced this work attracted the attention of the rest of the school as well as that of the school board and community. It is absolutely necessary that the clubs should find a problem of vital interest to the community and engage in the solving of it. When this is the case there is no lack of interest.

The Milk Testing project, then has been tried and found valuable. It is the intention of the State Leaders to urge this project as much as possible the coming year. By concentrating on one certain problem we believe that the club members will get a good deal more out of the club work than by scattering their energies over too many lines of work.

It is therefore recommended that at the first meeting this Fall, plans be made to take up this work. Each club needs a Babcock testing outfit. A good six-bottle enclosed tester with an extra set of bottles, two dozen sample bottles, a sampler, a pair of dividers a supply of commercial sulphuric acid, a graduate and a supply of preservative tablets, are needed. The High School will usually be glad to furnish this equipment if it has not already done so. Instructions will be furnished by the Extension Division in bulletin form. Record blanks will also be furnished.

We would recommend that the

club meetings for several sessions be given over to the discussion of the dairy industry. The following are suggestive topics:

1. The Babcock test, its history and influence on the dairy business.
2. Breeds of dairy cattle.
3. Origin of dairy breeds.
4. Feeds for dairy cattle.
5. Clean milk.
6. Advantages of dairy work.
7. Markets for dairy products.

Materials for the discussion of these topics can be gotten from circulars from the Experiment Stations of this and other states and from government publications, as well as from all up-to-date dairy and farm papers. These and related topics can be made very interesting by asking successful dairy men in the community to visit the club and speak to the members.

For the actual work of the club careful planning is necessary. Every man who lives in a home where one or more cows are kept should undertake to carefully test and keep a record of the milk from these cows in order to ascertain which ones are earning their way and which are not. Those who do not have cows at home can usually make arrangements to do the work with the neighbor's cows. Besides this, the club is advised to let the farmers of the community know that the members will test, free of charge, any samples of milk brought in and will furnish record blanks and instructions to anyone who will co-operate with them. A campaign of this sort will lead to fairer tests, greater care of the cows and a greater interest all through the community.

It might be of interest to state that several High Schools are planning to incorporate this project in detail in the regular laboratory work in agriculture. Prominent among these schools are the Nephi High School, the Wasatch County High School, and others.

There is just one other project which will be presented for careful consideration to the High School boys this season. A great deal has been said about better seed and better methods of seed production and seed selection, but very little has been done in the High Schools to promote the better seed idea. The High Schools can be made the centers for the production and distribution of seed if the teachers and students will study

the problem. To encourage this the seed judging and seed testing clubs will be organized. We expect to furnish literature along these lines, giving instructions as to methods of procedure and work.

Two or three fundamental ideas will be urged. To begin with, the club should study the seed problem in general. In other words, learn to know good seed. Without this knowledge no progress can be made.

In the second place a study should be made of the seed of the community. As a rule, home grown seed is best if everything else is equal. The club should find out where the best home grown seed is to be had. Then the club should plan to select for more elaborate tests some of the best seed in the community.

This selection, judging, and testing is about as far as the club can go for the first year. The project, however, contemplates more than that. In fact, it should extend over three or four years' work. After seed of a certain kind has been selected and tested, plans should be made to plant a seed plot under the direction of the instructor of agriculture. Then next year's seed should be selected from this plot, and so on as long as the work is carried on.

It is our purpose to outline briefly each month the work of the month, and we will urge all old members and officers and all teachers in agriculture to get the Agricultural Club under way early this year and to get work under way along these two lines. It may be that one line, as the Milk Testing, is all that the club wants to take up. Then, too, a group of four or five may be interested in the seed work. Numbers are not needed. Small groups work best but the work should be carefully planned. Communicate with the State Leaders often. We are here to help you.

### ARE YOUR OATS SMUTTY?

A. B. Ballantyne.

The answer of dozens of farmers has been, "No!" "Or there might be a head of smut here and there but they won't amount to much." Following this question many farmers have been invited into their own fields and with the County Agent have examined the crop for smut. In eleven cases the average amount of smut has been 22 percent; in two other cases the percent smutty averaged 7 while in one field planted oats that had been treated with formaldehyde not a single head of smut was found. In another field also treated less than 2 percent was found while all around the fields showed an average of 16 percent smut.

Utah County has approximately 7000 acres into oats this year and the average yield will probably exceed 50 bushels per acre. At this rate the loss will be about 8 bushels per acre or about four dollars. This makes approximately \$28,000.00 lost from smut alone. Can we afford it? It will cost not more than 10 cents per acre to treat the seed and thus reduce the loss from 22 percent to 2 percent or less.

If you are unwilling to believe that you have smut, go into your field, draw a coil around a small area, count all of the stalks within that area pulling up the smutty ones and lying them aside until the count is finished, then count the smutty ones. In doing this, count all heads even though they are very small. The smutty heads will be found shorter than the healthy ones. Why?

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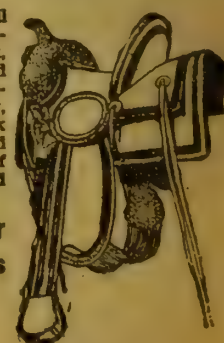
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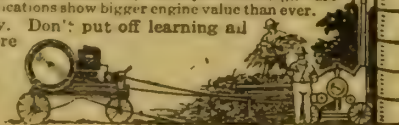
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# Lesson In Sewing

## LESSON III.

### A KIMONA NIGHT-DRESS

Supplies:—Paper 14 by 18½ inches. Lay the paper on the table with the 14-inch edge crosswise.

#### Guide Points—

Dot A. 2 inches up from the lower edge on the right-hand edge.

Dot B. 5 inches up from the lower edge on the right-hand edge.

Dot C. ¼ inch to the left of B.

Dot D. 3½ inches to right of left edge on the upper edge.

Dot E. 4 inches down D on a straight line with D.

Dot F. ½ inch below D.

Dot G. 2 inches from the lower edge on the left edge.

Dot H. 1¾ inches from the left edge on the lower edge.

Dot I. 1 inch from left edge, 1½ inches up from H.

Dot J. On the right edge ½ inch from the upper edge.

the center of the upper part of the sleeve.

Face the neck with a bias facing half an inch wide finished, joining the facings as directed in the chapter on "Bias Edges." Stretch the edge of the facings to fit the curve of the neck. This facing is sewed flat on the garment.

A half-inch bias band may be basted on the wrong side of the sleeve above the hem and stitched on both edges on the right side as a casing for a ribbon or bobbin. Or the bottom of the sleeve may be finished with the hem alone.

A lace edging overhanded around the neck and the sleeves will trim the garment daintily. If a tucked front is desired, allow extra width of material in cutting. For six 1-8-inch tucks (three tucks each side of the center) allow one and a half inches



#### Outline of Pattern—

Draw a slanting line from E. to C. Make a slight curve from C to A. Draw a slanting line from J to F. Draw a straight line from F. to E. Draw a curved line for the neck from G to H through I.

#### Cutting and Making—

Supplies:—Soft Finished White Cambric, 28 inches on the Warp and 17 inches on the Woof. (5 by 5 inches for facing.) White Cotton, No. 70; Needle No. 9.

Place the material on the table with the long edges lengthwise. Fold it from left to right through the center and crease on the fold. Fold it again crosswise through the center and crease on the fold. Lay the pattern on the material with the straight edge of the pattern on the lengthwise fold of the goods and the top of the pattern on the crosswise fold. Pin it. There are four thickness of material to be kept in position. Cut out the night-dress. Baste the seams and sew them with either French or flat fell seams.

Allowance is made on the pattern for a one-inch hem at the bottom of the night gown. In turning this hem, keep the side seam in the hem even with the seam above the hem. It is necessary, on account of the curve, to hold the edge of the hem in a trifle, ease in the fulness beyond the seams.

Allowance is made at the bottom of the sleeve for a three-eighths of an inch hem.

Before facing the neck, work two eyelets, one on each side of the center front, through which to pass a ribbon or bobbin after the garment is completed. Eyelets may also be worked on the sleeve just above the hem in

extra material. The material should be twenty-eight inches by eighteen and a half inches if the tucks are used.

In cutting the tucked nightgown, pin the edge of the pattern three-quarters of an inch from the edge of the fold, which will give the right quantity of goods for the tucks.

Make the first tuck an eighth of an inch from the center front. It should be three inches long. The tucks should be an eighth of an inch apart. The second tuck should be two and a half inches long; the third tuck two inches long. The fold edges of the tucks should be turned away from the center front.

The extra fulness in the back can be drawn in with a ribbon or hobbin.

#### POINTS FOR THE SILO.

Because farmers are thinking "silo" these days the following points as to silos are worth keeping in mind:

The walls must be air-tight.  
The walls must be smooth inside.  
The best type of silo is round.  
The roof should be water-proof.  
The structure should be substantial. It has to stand much pressure.

The cost should be from \$2 to \$5 for each ton of capacity, provided the total capacity is to exceed 100 tons.

A silo 14 feet in diameter and 32 feet high will hold 100 tons.

One hundred tons of silage will feed 25 head of stock for 200 days.

A silo should be placed as near as possible to the place at which the silage is to be fed, and should be on the least exposed side or end of the barn.

Any type of good silo is a valuable adjunct to the farm equipment where there is live stock to feed.

## Pattern Department

Full directions for making as the quantity of material required, accompany each Pattern. Price of each Pattern, 10c; no extra charge for postage. When ordering, all you have to do is to let us know your name and address, the number and size of each Pattern you want, enclose 10c for each pattern, and address all your orders to: PATTERN DEPARTMENT, THE UTAH FARMER LEHI, UTAH.



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40 acres, East Sandy, 3-room house, stable, water right. For quick sale, \$2100.

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160 acres, South Jordan, good land, \$16 per acre. Terms.

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# What the Bankers Can Do For Livestock Production

An Address given By Dean J. H. Skinner, Purdue University, at Banker-Farmer Convention.

We all recognize the importance of growing our meat. Livestock is important to the citizens of the United States because it furnishes a large amount of employment to this country. Then again the industry is of importance because of the income, the business which it involves in this country. I never feel like making a talk on livestock without pointing out the importance of livestock in the maintenance of soil fertility.

I want to call your attention to the utilization of the roughage that is grown all over this great Middle West and South through livestock, much of which is otherwise sold or wasted. So that livestock does become an important factor in the maintenance of soil fertility through the utilization of waste and the turning back of a large percentage of fertility that might otherwise go off the farm. We may also point to the importance of livestock in connection with the changing or improving of our crops there. We find a great many examples of new crops being introduced. As an example of this we have alfalfa fields all over the Middle West today. Alfalfa is being introduced in many places in Indiana, in order that the farmers in some of those counties may maintain their livestock throughout the winter and a new crop brought about, a new crop system brought about through livestock. As an example of what livestock does in improving utilization or waste, we have only to point to the silo. What business is there that can afford to grow or manufacture a great product and then waste one-third of the product? Our corn farmers are doing much of that.

We are finding out in some investigations that are being made in Indiana that where we increase the livestock under good conditions and proper management, we also increase the labor income of the farmers materially, and that certainly is worth while. Livestock notwithstanding some of its drawbacks, does in many cases under proper management develop the income of the farmer. Why doesn't every one go into the business of growing livestock? You will find that the livestock production of this country has not kept pace with the growth in population as was pointed out in reference to the importation of meat from South America. You say if this is the case: "Why is it that more men are not growing livestock?" Some of the more important reasons why men are not growing livestock are more for the bankers. One of the important reasons why the farmer is not engaged in the livestock business more today in the Middle West and other places, is due to the fact that the profits, and especially the prices for livestock are uncertain and unstable. This is recognized by livestock men not only in educational and scientific circles, but on farms everywhere. If we could guarantee profits from the labor and the expenditure in livestock, we would see a great change in the system of farming in this country. What can the bankers do along this line? One of the keynotes to the improvement of our systems of agri-

culture is to make a more stable, certain product from our livestock. The farmer is not well informed as to the dangers of disease or methods of controlling disease in livestock. We need better laws for the control of disease. We need education along the line of importance and dangers of disease, and the bankers certainly are in position to educate as no other class of men in this country, along those lines.

It is important to study some of the results of our experiment stations in the matter of rations for feeding animals. In our Indiana experiment station we have shown through a series of eight years that it is possible to feed a ration to fatten cattle bought on the market and where everything is paid for at the market price, at a profit of over \$9 per head, with the best of rations, and we haven't had a single year in which some of the rations, which were commonly used among the farmers on Indiana farms fell down away below the line where they were making a profit, and showed a loss to the farmer who is feeding those very common rations. I only need to call your attention to the indiscriminate breeding all over the United States. I think that applies down South as well as in the North, because they are doing great things down there in bringing about an understanding of better breeding, and I want to impress the bankers with the fact that they have the key to the situation.

What can the banker do in this connection? It has been pointed out that bankers have offered certain prizes, and that they are doing a great deal to encourage contests, and all of those are very desirable things, but if many who are putting money into calendars or sending out some nice little picture, would put it into purebred sires and give them or lend them out to the farmers, it wouldn't be long until they would see returns which they don't see through the contests or calendars. The banker is not only in a position to bring to the farmer information and to lend a stronger influence for better laws, but also to have a mighty influence in the development of stable markets.

So all along the line we see that the bankers are in a position to educate, to bring the pressure for better equipment, for better methods. Ask the average man why he doesn't keep more livestock, and he will tell you because he has no fences, he has no buildings, possibly, because he has no water, possibly, because he hasn't any grass, possibly, because he hasn't this or that or the other piece of equipment. Who furnishes the money that goes into the betterment and improvement of our farms? Some one has said that we need a better system of credits. I am not so much interested in that statement. It may be an important thing in some sections, but in Indiana, and I believe in much of the Middle West, what we need is more education along the line of the credits that we already have, and who is in a better position to educate the farmer today in the wise use of credit than the banker, if he undertakes to inform himself?

## The Weed Law and Co-operation

Everyone should help get rid of weeds. The weed problem is a serious one, and needs immediate attention. Very few, if any, of our worst weeds are native plants; they were imported with agricultural seeds and commercial feeding stuffs, and they are being distributed in this way every year, as well as by the natural agencies such as wind and water.

We have a Weed Law in this state, but only a few counties have taken advantage of it. The law alone cannot accomplish the purpose of eradicating all the noxious weeds. We must exterminate the weeds from our fields, then the ditch banks, canals, and railroad right of ways.

There is an enormous loss each year to the farmers from weeds. It is estimated that this amount will run into several hundred million dollars each year. Any farmer who will tolerate weeds on his farm will soon learn that he is responsible for the loss of many dollars.

Weeds crowd out economic plants. They use up the moisture and plant food that should go to increase yield and economical crop production. They attract fungus diseases as the rusts of small grains and injurious insects as the grasshopper. Some of the weeds are harmful to stock because they have barbed seed or are poisonous.

Confer with your County Commissioner, and see that a Weed Commissioner is appointed, and then go to work and co-operate with the Irrigation and Railroad Companies and individuals and exterminate all noxious weeds—on your own farm first, and then on the streets and public highways and right-of-ways of the railroad companies. If you cannot secure their co-operation by working with these people and showing them the advantages of destroying the weeds, then compel them to do so by putting the law in force. This work can be done by the County Road Supervisor and his assistants, but first of all see that he is converted to the law before the appointment is made.

There is every reason why you should get this robber (weed) and burn him at the stake. The longer you put the job off the bigger problem you have on your hands. Weeds grow and multiply very fast.

### SOUNDS OLD SLOGAN

As the threshing season advances, the Nebraska College again sounds the old, but ever important, slogan of saving the straw stacks. The crying need of soils as a whole is more organic matter. This can be supplied at home with the adoption of proper farm practices. A straw pile from a 20-acre field, for instance, is worth from \$50 to \$75, or \$2.50 a ton, in nitrogen, phosphoric acid, and potash alone. When the straw pile is burned, only 3 percent of the former value is retained.

The means of disposing of straw varies. On a farm during the seasons of 1911 and 1912 the wheat straw from a 40-acre field for two years was distributed by hand on a windy day on a 20-acre plot. The adjoining 20-acre plot was left without straw. The yield of wheat during 1913 on the plot to which the straw had been applied was 26 bushels, and on the other plot seven bushels.

## Colt Needs Full Feed

Dr. C. W. McCampbell, Kansas A. C.

In feeding and caring for the growing horse, the aim and purpose should be to secure the greatest possible physical development at the least possible cost. Often the colt is fed too sparingly, with the hope that the growth which it does not make as a colt will be made at some later time.

This is a mistaken idea, for the stunted colt will never fully recover. In developing and feeding young, growing horses one should remember that the feed and care they receive during the first year or year and a half of their lives determine largely what they will be at maturity.

The young, growing horse must be fed the proper kinds of feed and must be fed liberally. The mineral content of the ration, as well as the protein, the carbohydrates, and the fat, must be carefully considered. The bony framework demands a considerable amount of calcium and phosphorus. The nervous tissues demand sodium, potassium, and iron. These, together with sulphur and magnesia, are the most important forms of inorganic matter needed.

### Mineral and Protein Together.

Experience has shown that colts make a better growth on a ration of corn and alfalfa hay than on corn and timothy or prairie hay. This difference is due as much to the difference in mineral content of the two rations as it is to the difference in the digestible nutrients.

It so happens that most of the feeds that contain large amounts of mineral matter—alfalfa hay, bran, and linseed meal—also contain large amounts of digestible protein, the muscle-forming element, so that it is evident that these feeds should enter largely into a ration to be fed the young, growing horse during that part of the year when grass is not available. With bran, and alfalfa hay, there must be combined oats, corn, barley. The combination of feeds to be used depends somewhat upon the feeds available and their cost in any particular locality. The best results in developing young, growing horses will come, however, only from those combinations which are rich in mineral matter and protein.

### Linseed Meal Desirable.

Linseed meal, while not absolutely necessary when bran and alfalfa hay are used, gives the coat a glossy appearance, indicating thrift and good condition, and also seems to stimulate and assist digestion and assimilation. Horses will relish a little prairie hay, straw, or corn fodder when fed large amounts of alfalfa hay.

During the summer the cheapest, and probably the best, ration for the growing horse is pasture grass of some kind. If the pasture is good, little, if any, grain will be necessary for average growth. If, however, the pasture is poor, if the season is dry, or if the colts do not continue to grow and remain thrifty and in good condition, it will be necessary to feed some grain, especially to the sucklings and the yearlings. If the maximum of growth and development is desired, it will be necessary to feed some grain with any kind of pasture. The grain portions of the rations



suggested are well suited to this purpose. Horses should have access to salt at all times.

Another important matter in developing growing animals is the water supply. Often a water shortage for a few days, or even weeks, does not cause much concern or alarm, or a plentiful supply of stagnant or even filthy water is deemed sufficient, but either condition is a serious detriment to the growth and thrift of the young animal. It is just as important, particularly in summer, that growing animals have a plentiful supply of clean, pure water as it is that they be well fed.

#### ICES AND SHERBETS.

An ice is made of water, fruit juice and sugar; but as many object to the rasping, hard, thin composition, whites of eggs are quite generally used to modify the character of an ice, and then it is called a sherbet. The true sherbet is made of a syrup, instead of simple water and fruit juice, and gives the substance body and richness. Sherbets may be frozen in bulk, in forms, or partially frozen and served in glasses or cups, the cups being sold under the name of sherbet cups. A white ice or sherbet is simply white from lack of color in the fruit juice and the free use of beaten whites of

eggs. For ices and sherbets, the amount of sugar may be increased or diminished, according to the acidity of the fruit juice; freezing always abstracts the sweet taste from fruits, so the unfrozen mixture should be a little sweeter than is desired when frozen. A very good rule for ices is one quart of fruit juice, two quarts of water, three pounds of sugar. Dissolve the sugar in boiling water, cool, add the fruit juice and freeze as for ice cream. Ice takes longer to freeze smoothly than ice cream, and must be packed carefully afterwards, as it softens rapidly. Must be frozen two hours before serving.

Alice—"Why are you taking up Botany?"

Kitty—"Because my fiancée is interested in a plant of some kind, and I want to be able to converse intelligently with him about his business."

Husband (at breakfast table)—"Oh, for some of the biscuits my mother used to make."

Wife (sweetly)—"I'm sorry you have not got them, dear. They would be just about stale enough by this time to go well with the remark."

Start the cultivator going after each rain in order to retain the moisture.

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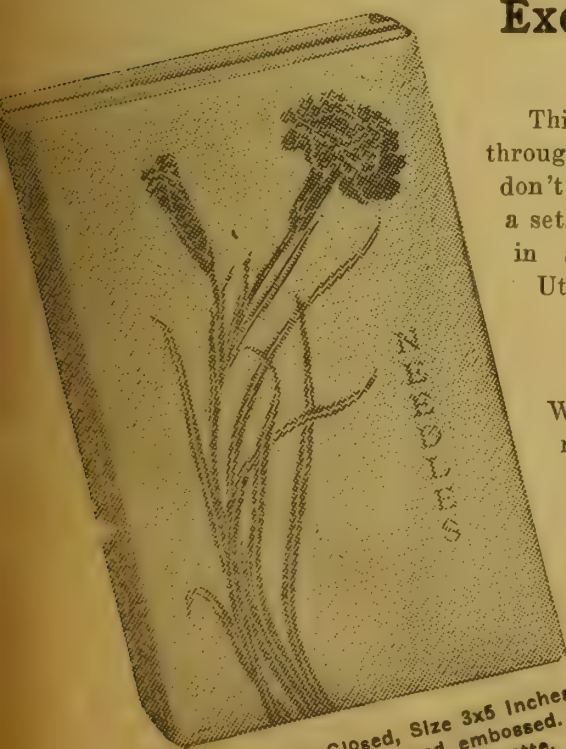
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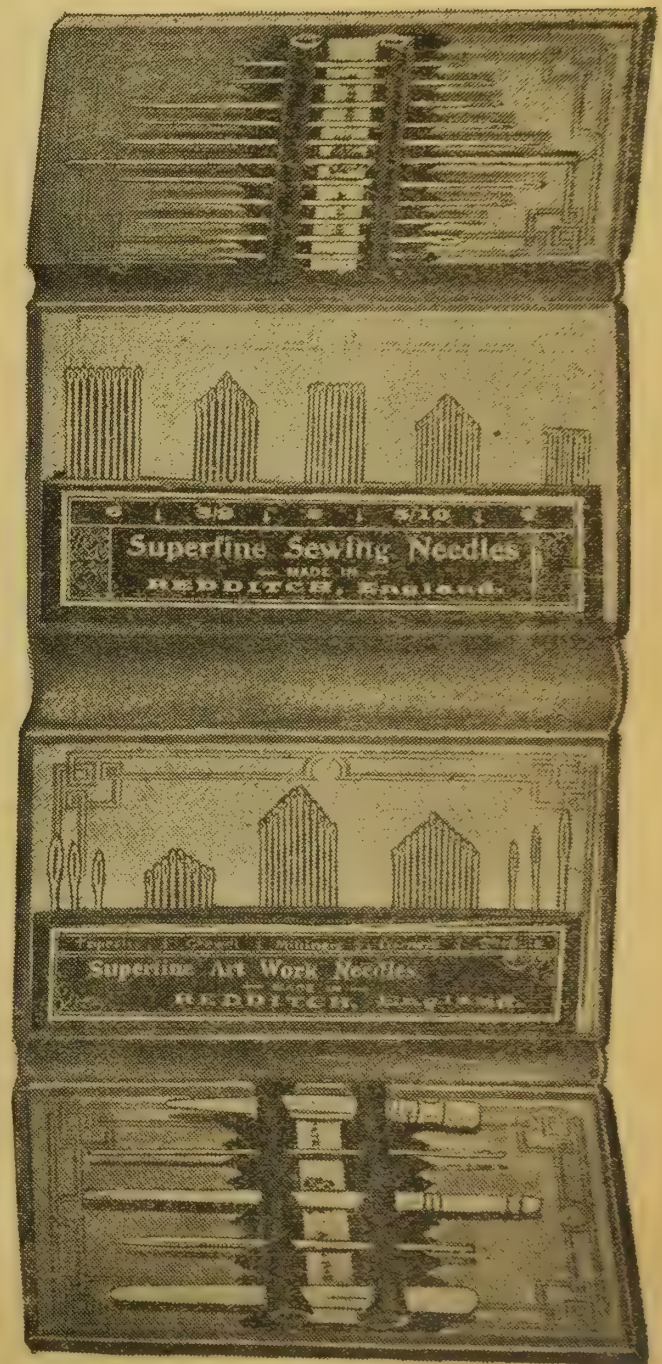
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## Skim Milk Has High Food Value

### Nutritive Elements in Skim Milk Underestimated.

Skim milk is a very economical food material in the opinion of experts in the Department of Agriculture, and might well be more largely used as human food—this in spite of the fact that it is nine-tenths water. The argument for economy is based on the price at which it is usually sold and upon the composition of the remaining tenth, or the nutritive portion.

Whole milk, as everyone knows, is an indispensable food for the young, and even in the diet of the adult it is comparatively economical. The only nutrient taken from it in skimming is the butter fat. There is left, therefore, in the skim milk, not only all of the sugar, which amounts to about  $4\frac{1}{2}$  parts in every 100, and all of the mineral substances, but also all of the protein. The last named substance is important because, besides serving as fuel for the body, as fats, sugars, and starches do, it also supplies nitrogenous tissue-building material. The proportion of protein in skim milk, as well as of the mineral constituents, which are also valuable for body-building, is even greater than in whole milk.

Since the nutritive part of skim milk consists very largely of protein, it is to be classed, as whole milk is, with such food materials as eggs, meat, fish, poultry, and cheese (though it is much more delicate than those foods) rather than with such substances as sugar, which serve only as fuel. Two and a half quarts of skim milk contain almost as much protein and yield about the same amount of energy as a pound of round of beef. When skim milk sells for 4 cents a quart, or about 2 cents a pound, and round of beef for 20 cents a pound, a dime, or any other sum of money spent for skim milk will provide nearly twice as much nourishment as it will if spent for round steak. Round of beef, of course, is one of the lower-priced meats and when compared with the more expensive cuts, skim milk makes a still better showing from the standpoint of economy. The comparison with oysters is very significant: a quart of oysters contains less than twice as much nourishment as a quart of skim milk, and yet it often costs several times as much. Both are useful, wholesome foods, and in the oyster one has a special flavor. A combination of the two in oyster stew or creamed oysters is an economical way of using the oysters, since it makes a given quantity "go further."

Whole, unskimmed milk has, of course, a more pleasing taste to many people, and those who do not need to consider the additional cost will, no doubt, always prefer it. When used for cooking, however, the difference in taste between skimmed and unskimmed milk is not perceptible, and there are a great many uses to which skim milk can be put in the preparation of foods. In the making of cereal mushes, for instance, the use of skim milk in place of water adds greatly to the nutritive value, particularly by raising the amount of tissue-forming materials. In making milk soups, chowders, custards and cakes also, it can be profitably used. In chowders the lack of fat is made up by the use of salt pork.

### Corn Chowder.

- 1 can of corn or 1 pint of fresh corn, grated.
- 4 cups of potatoes, cut into small pieces.
- 2 ounces salt pork.
- 1 small onion, chopped.
- 4 cups of skim milk.
- 1 teaspoonful salt.
- 4 ounces crackers.

Cut the pork into small pieces and fry it with the onion until both are a delicate brown. Add the potatoes and corn; cover with water, and cook until the vegetables are soft. Add the milk and salt, and reheat. It is well to allow the crackers to soak in the milk while the potatoes and corn are being cooked. Some people cook the cobs from which the corn has been removed, in water, and later use this water for cooking the potatoes and corn.

### Cakes Without Flour.

When cottage cheese is made from skim milk, cream or butter is very commonly added, to make it more palatable. For some purposes the cottage cheese curd from skim milk is better than that from the whole milk, as for example, in cakes made from the following recipe, which is unusual since it contains no flour.

### Curd Cup Cakes.

- 1 cup dry curd.
- 4 eggs.
- 3-4 cup sugar.
- 1-8 teaspoon salt.

Beat the yolks of the eggs thoroughly; add the sugar and the curd, (which must be very dry) and beat until the mixture is smooth. Combine this mixture, by cutting and folding, with the stiffly beaten whites of eggs. Bake for 20 minutes in a moderate oven in which the heat is greater at the bottom. Use unbuttered gem tins. This amount should make about 30 cakes.

In order to prepare the curd, take  $2\frac{1}{2}$  or 3 quarts of sour skim milk; heat to the boiling point, and strain; when no more liquid runs off, press the curd between cloths or spread it out in a thin layer on a cloth and dry it in a warming oven. If the curd from the quantity of milk given amounts to more than a cupful, it is too wet.

If a very sweet cake is liked, as is the case in parts of South America, where these cheese cakes are well known, two cups of sugar may be used with two cups of the cottage cheese and four eggs.

In recommending skim milk as food, the facts should always be kept in mind that it has gone through one more process in the course of its preparation for family use than whole milk has—that of separation or skimming. This, in the case of a food material so liable to become contaminated and to be the carrier of disease, is a very important matter, and the consumer should take even more pains than in buying whole milk, to know that it has been carefully handled, particularly if it is to be used raw.

The provisions of the Food and Drugs Act and common honesty require that skim milk should be sold for what it is and never as whole milk. It should be plainly labeled as skim milk. To sell it as whole milk would not only be a violation of the Federal Food and Drugs Act, in cases where that law applies, but also a violation of the State Law in any State where it might be sold.



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## GEORGE FITCH'S ESSAY

### ON ALFALFA.

George Fitch, the well known humorist, is the author of the following "vest pocket essay" on alfalfa:

Alfalfa is the greatest known breakfast food for cattle. It is a short, curly plant looking like overgrown clover and possessing a flavor which causes the most blasé cow to brighten up immediately and pass her plate for more.

Alfalfa is distinguished for the persevering manner in which it searches for water. When an alfalfa plant begins to grow, it does not erect a beautiful and luxuriant superstructure which dries up and blows away with the first hot wind. It first gives its earnest attention to its roots. If water is scarce enough, an alfalfa plant will grow downward 20 feet before it grows upward any to speak of. Then while the corn withers and the tomato vine becomes exceedingly dejected, the alfalfa plant flourishes and gets out three editions of hay per year.

When an alfalfa plant is firmly established it is hard to root out and eradicate as a congressman who has been placing government appointments where they will do him the most good.

After a farmer has induced a 100-acre alfalfa field to grow blithely through the long hot summer, he leads a gay and care free life, skimming his field with a mower whenever he needs a new automobile, and piling up mountains of alfalfa which contribute cheerfully to the high price of meat by selling at \$15 a ton. Our notion of the ideal employment is to hang around home all winter and spring

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reading a good book, and then go out under a four-acre straw hat in the summer and bale up a few bonds in an alfalfa field. One can almost always distinguish an alfalfa farmer in California by the careless way in which he lights his cigar from a bank note without looking at the denomination.

Alfalfa has made many farmers rich and happy, but the price of cattle continues to soar as if it were inflated with gas. What we need is more alfalfa. If all the highways in America were planted with alfalfa instead of dog fennel and thistles, perhaps there would be room in this distressingly prosperous country to pasture a few more exceedingly edible cows.

## WHEN CHOLERA IS NOT SUSPECTED.

In some herds one or two hogs may be noticed off feed for a while, and then they may show a gradual improvement and finally recover. These animals may infect the entire herd and the outbreak become general before there is any suspicion that the trouble is cholera. When the first one or two hogs, owing to their greater resistance, may have had cholera in chronic form, other animals in the herd may quite generally have the acute type and die rapidly; or again the whole herd may have a slow or mild type of cholera with only an occasional death. In this case cholera is not always suspected, and yet this herd may be the center of a wide infection. The acute type leaves no doubt as to the disease, the hogs dying rapidly and most of them showing the symptoms commonly associated with cholera. Where the acute type of cholera has once visited a farm, the farmer is often loath to believe the slower or chronic form of the disease to be cholera, and before he is aware the whole herd is more or less affected.—Kansas College of Agriculture.

## FOR THE POULTRY MAN.

Cut down the corn feed during hot months, especially for moulting birds. Green feeds, alfalfa, wheat for grain.

Be careful of lime and insect powders as dusters of little chicks. Vermin powder will often blind the chick you dust, and inflame the eyes afterward. Dust in the feathers of the mother hen will do the same thing, and chicks scratching in limed grounds have come away digging at their eyes, which next inflame, stick together, and the chick acts miser-

able and cannot eat for several days after with any satisfaction.

If your poultry runs are not provided with shade from growing things, be a little merciful to your poultry and supply shelters, 20 to 30 inches high, of light boards or even of canvas.

Bone meal for the growing chicks is a help to strength that few give heed to. Notice the big legs of chicks fed heavily and muscle-forming foods to which is added each day some bone meal. More often than not, large weakness in the growing chicks, a weakness that leads to disaster, is caused by heavy feeding, and the chick's body growing faster than the leg bones; the legs weaken and often become paralyzed. Bone meal would have staved this off.

Market your eggs regularly, twice a week at least. Your customers want fresh eggs, and you can't guarantee them such if you hold them in not weather without cold storage facilities.

## TAKE THE TEMPERATURE

The man who has not the time to take the temperatures and vaccinate accordingly has no business vaccinating hogs. Without taking this precaution, the operator is working in the dark. Failure to take temperatures in infected herds and to give an increased dose of serum has been the cause of bringing the whole serum treatment into disrepute in certain communities.

All pigs vaccinated showing a high temperature should be marked either by placing a nose ring in one ear or by cutting across the hair with a pair of shears. If the cut is made of good length and always in the same place, those pigs can easily be picked out. For accurate information this is important.

A new strawberry bed may be set out in August.

Cut gladioli when two or three of the lower flowers are in bloom, put in water change the water every day or two, snip off half an inch or so of the stalk, and the flowers will open in the house.

Cut sweet peas early in the morning or late in the afternoon. Put in water at once. Keep all flowers from going to seed if you want the plants to bloom well.



## The Typhoid Fly and Soil Fertility

Dr. A. E. Vinson, Arizona Experiment Station.

We should not forget that house flies travel for considerable distances, and that one of the favorite breeding places of this dangerous nuisance is the manure pile. A trip about the edges of most cities will reveal hundreds of piles of this pestilence-breeding but precious stuff scattered about the vacant places—a constant reminder of our reckless and wanton extravagance. Upon the surface these seething heaps become a curse on the whole community, but under the ground, where they belong, they will bless us with prosperity.

Within a few miles of most of our cities there are hundred of acres of land crying out for this food which they need so badly, and which is being ruthlessly burned up by the sun, washed away by the showers, blown about by the winds, and lost forever. That farm with adobe soil would become a rich mellow garden by several liberal applications of this waste; or that stretch of sand would be given a new hold on its share of a never too abundant supply of water, and would bring to its owner a correspondingly increased crop. We have labored already too long under the hallucination that soils are over fertile, and often have forgotten entirely that good mechanical condition is essential to reap the harvests of natural fertility. Our soils in general are all right, as good as any in the world—if we make them so. We scour the mountains in search of gold and leave true wealth, in the rough, to become the plague spots of our communities.

But what is the real commercial value of the common stable manure? Three constituents of this waste are much sought for and command good prices in the world's markets today. Our fellow farmers back East are paying about 20 cents a pound for nitrogen, 4 cents for phosphoric acid, and 5 cents for potash in commercial fertilizers, that have not nearly the value the same food elements have when found in stable manure. The humus supplied the soil by manure is worth even more than the accompanying food elements, because humus is the master key that unlocks the potential fertility in our soils. Some day we will be found going to the store to buy this same fertility we are now wasting. It will come higher; and no master key, such as we might now have for taking it home, will be found in the sack. Farmers in New York are paying today at the rate of not less than \$2.50 for the sacked condensed plant food contained in one ton of the manure that now outrages our sense of beauty and presents us with swarms of flies. Just add the freight, and don't be behind the times and forget the up-to-date profits, and you will have what the plant food equivalent of a ton of manure is going to cost you.

Every ounce of manure from our cities should find its way into our soils, and that would be only a drop in the bucket to what could be used with profit.

### HOW TO CAN SWEET CORN.

Now when good sweet corn is so easily procured is the time for the housewife to can some for use next winter. When the corn selected is young and tender and is canned soon

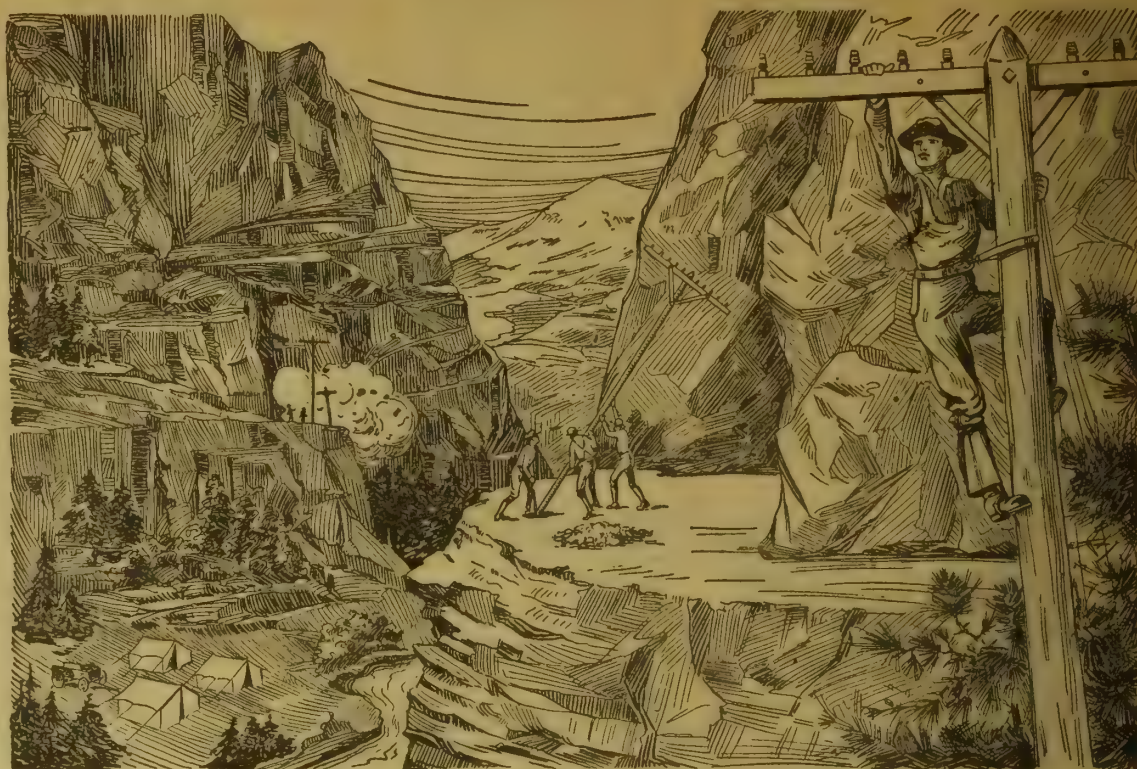
after gathering, the product is far superior to the commercially canned corn. Those who have tried home-canned corn one year do not have to be urged to try it again.

Corn is more difficult to can than fruits and most other vegetables. This is because the corn forms such a compact mass that it is hard to heat through, and because it is more

difficult to kill the micro-organisms which cause it to spoil.

To can corn, boil it in salted water, just as if you were going to serve in from 10 to 15 minutes. Cut it from the cob and pack it in quart jars. Add enough boiling water to completely cover and rounding teaspoon of salt to each quart. Put on the covers of the jars loosely and place the jars

on a rack of some kind in a boiler. Put in enough clean water to completely cover and boil four hours, counting from the time when the water commences to boil. When the time is up, remove the jars from the water and tighten the lids while the jars are still hot. This is more easily done with a spring seal than with a screw neck jar.



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# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region.

VOLUME XII; No. 2

LEHI AND SALT LAKE CITY, UTAH

AUGUST 14, 1915





# Co-operative Milk Condenseries Not Advisable

Likely to Succeed Only When Conditions Are Very Favorable, Reports United States Department of Agriculture.

The department during the past few months have received inquiries from dairy farmers regarding the feasibility of establishing co-operative factories in their communities for the commercial production of condensed and evaporated milk. Reports from a number of field agents of the department also indicate that unscrupulous promoters are unusually active in attempting to establish co-operative condenseries in dairy-farming communities under conditions that practically foredoom such enterprises to certain failure. These facts seem to justify the publication of a warning to dairy farmers who may contemplate investment in a co-operative condensery. Before joining such an enterprise one should consider carefully the requirements fundamentally essential to the successful production of condensed and evaporated milk on a commercial scale, and make sure that the community and the proposed organization will be able to meet such requirements.

The fact that a comparatively large number of successful co-operative creameries and cheese factories are now in operation may appear to be a preliminary argument in favor of organizing co-operative condenseries. Such an argument should not be mistaken. The dairy farmer who is dissatisfied with the present market for his milk, from either the standpoint of convenience or of the price received, should not overlook the wide variation in conditions which are essential to the commercial success of these three different enterprises.

While the department does not wish to condemn utterly the idea that a co-operative condensery can be operated successfully, the available evidence clearly indicates that such an enterprise is much more difficult and hazardous than any other form of co-operative dairy industry.

A brief discussion of some of the conditions which are considered essential to the successful operation of a milk-condensing factory of commercial size will disclose some of the difficulties which a farmers' cooper-

ative organization would have to overcome if failure is to be avoided.

First. The plant should be located in a community which is not only thoroughly adapted in every way to a high standard of extensive dairy farming but is already far advanced in such development. The herds of cows should be large, healthy, well cared for, and of a breed or breeds that produce a grade of milk reasonably adapted for condensing purposes and the production of a standard product.

Second. In establishing a plant for condensing milk by the vacuum process it is of primary importance that the location provide an abundant, steady supply of pure, cold water, independent of the supply required for boiler use. The quantity of water required to condense a given quantity of milk will, of course, vary with the operating conditions, such, for example, as the temperature of the condensing water and the temperature (or the pressure) of the vapor to be condensed. A general idea of the importance of water supply can be obtained from the authoritative estimate that about 3 gallons of water are required for the condensing of 1 pound of fresh milk (about 1 pint). Difficulty in obtaining an adequate supply of good, pure cold water is a cause of serious embarrassment to some of the commercial condenseries now established, and the lack of it has been the cause of many failures.

Third. An abundant supply of pure milk is an absolute necessity. The exact quantity required daily will, of course, vary with the size of the plant. Several reliable authorities have estimated that for the profitable production of condensed milk on a commercial scale the supply of raw milk to the factory should not fall below 15,000 pounds a day. This estimate is exclusive of the daily supply of milk normally required for other purposes by the community. Furthermore, if the finished product is to be of marketable quality, the milk received at the condensery must be of exceptionally high grade; that is, clean and pure.

While first-class milk is essential for the manufacture of a first-class dairy product of any kind, it is absolutely necessary if a condensed-milk factory is to be a success. If a few cans of low-grade milk are not detected at the receiving platform of a condensery, the slight defects in the raw milk are multiplied in the process of condensing it, and the result is practically certain to be the complete loss of the whole batch, which may represent a financial loss of several hundred dollars. This statement may be illustrated concretely: It is claimed by authorities that raw milk containing as much as 0.2 per cent acid (calculated as lactic acid) is not fit for condensing purposes. This does not necessarily mean that it taste sour, but if accepted and condensed in the ratio of 2.25 to 1 (it may be more but is seldom less), the acidity, increasing in the same ratio, would reach 0.45 percent, which would be practically certain to cause a sour taste in the finished product. Every housewife knows that sour milk will coagulate or curdle on heating, and that the higher the temperature the

more rapid is the curdling process and the firmer the curd. This makes it unfit for cooking purposes. In the commercial production of evaporated milk, the product must be sterilized in the cans at a very high temperature in order to insure a good keeping quality. It is obvious, therefore, that if milk is delivered to the factory with a slight excess of acidity it would probably be impossible to sterilize the product obtained from it without producing a hard curd, which would make the product absolutely unsalable, and thus a total loss to the manufacturer. Furthermore, excessive acidity, which is principally caused by improper care and handling of the milk, is not the only condition that may render milk unfit for condensing. Other undesirable qualities of the milk may also be induced by poor health and improper care of the cows, by the kind and the condition of their feed, and by many other details of imperfect management of the dairy farms.

The services of experts thoroughly qualified by training and long experience in this particular line will be required to detect and guard against these unfavorable conditions. Even then it is often difficult to avoid these financial losses. Considering the fact that the condensing of milk, on any considerable scale, is of comparatively recent development, it is to be expected that competent men of special training and experience in this particular field would not be numerous. Considering also the very rapid growth of the industry during recent years, it is to be expected that the demand for such men would largely exceed the supply. It follows, therefore, that a farmers' co-operative organization which enters this field at this time and succeeds in securing for its plant the men who are qualified and competent to steer the organization clear of the financial losses likely to be incurred from an undesirable supply of milk will be indeed fortunate.

Fourth. Adequate facilities for marketing constitute another essential to the commercial success of a condensed milk plant. Commercial success, of course, implies a profitable market for the product—a market which is readily and directly accessible to the plant without adding excessively to the cost of manufacture, either in the form of high freight rates or long hauls from the condensery to a railroad. As already indicated, the successful manufacture of condensed milk on a commercial scale requires a large output of the finished product—a very much larger output than is likely to be consumed in the local market; therefore, in selecting a location, favorable transportation facilities to a good market or markets are a consideration of vital importance to ultimate success.

Fifth. In establishing and operating a co-operative condensery the necessity of adequate capital is another important question. The cost of buildings and equipment will, of course, vary with the purchase of superior or inferior materials and workmanship, as well as size of the plant and, in some measure, the kind of condensed milk to be produced. In any case, however, the buildings should be thoroughly substantial, more so than is commonly considered necessary for a cheese factory. The major part of the equipment is of a very highly specialized, more or less complicated, and very expensive type. The proper operation of the equipment, especially the vacuum pan, and the ster-

## Increasing Demand For Utah-Idaho Sugar

The U. S. Department of Agriculture's report on the beet sugar industry in the United States for years 1910-1911 shows a wonderful growth in the industry.

The production of Beet Sugar during the Twelfth Census, year (1899) amounted to 81,729 short tons, while the 1912 product aggregated 700,000 short tons, valued at \$73,000,000. The growth of this industry, and the plans for its increase, indicate the ever increasing demand for this product.

The highest quality sugar is necessary when making jelly, ice cream, summer pastry, preserves, etc. That's why housewives insist on getting Utah-Idaho Sugar from their grocers.



## Registered BULLS

## Short Horn and Herefords

If you want one or a carload, phone, telegraph or write at once

**E. W. Patrick**  
Marion Hotel  
Ogden, Utah

In January 1911, this bank has 3411 accounts, exclusive of certificates of deposit.

In July 1915, it has 10,456 accounts.

For the reasons of this steady increase in popularity ask our customers.

**Walker Brothers**  
Bankers

SALT LAKE CITY

Founded 1859. "A Tower of Strength"





ilizer when the product is sterilized in cans, calls for a high degree of skill and large experience if serious losses are to be avoided and a standardized legal product is to be produced.

The cost of buildings, equipment, and operation of a plant for the manufacture of evaporated milk (unsweetened condensed milk for household use) will illustrate the capital required for the manufacture of any other form of condensed milk. As this is the form which is most in demand, the manufacture of this product offers the best chances of success. Some reliable authorities have conservatively estimated that adequate buildings and equipment for a minimum production on a commercial scale would cost in the neighborhood of \$25,000, exclusive of working capital. The markets for condensed milk at best are very unstable. Frequently the manufactured product must be held several months before it is marketed. In the meantime the plant must be kept in operation, for which a very considerable surplus capital must be provided. The same authorities estimate this item at \$10,000.

It therefore appears that in establishing and operating a co-operative milk condensery capital to the amount of at least \$35,000 must be provided. That this estimate is conservative is indicated by the fact that manufacturers of condensed milk have stated that a capital of \$50,000 is usually necessary to operate a condensed-milk factory.

Sixth. Commercial success in any manufacturing enterprise usually requires much more than merely placing the product upon the market. A demand for the product must be firmly established and a regular trade developed before success is assured. To attain such a result the new product must meet the keen competition of similar products already well established. There are many well-established brands of condensed milk now on the market. There may be room for many more but new brands, regardless of their quality, must expect to overcome strong competition before a firm foothold is gained. This usually requires extensive advertising and a competent, vigorous sales force.

The foregoing should not be construed to mean that the Department of Agriculture is opposed to co-operative enterprises among farmers. On the contrary, the department will heartily indorse, encourage, and aid such co-operation whenever reasonably certain benefits and profits are to be derived therefrom by the farmer.

#### PURE WATER FOR HOGS.

John Harris.

A hog should always have access to a liberal supply of fresh pure water.

If we study a hog under natural conditions we find that he is one of the cleanest animals and does not have a love for filth. However as he is kept on too many farms he has little chance to choose desirable surroundings. If there is a disease laden mud hole in the field, that is probably where he will be found most of the time during the hot summer months not, as I have said before, because he loves such conditions but because he prefers filth rather than suffer from the heat. In addition we know that a hog sweats through the pores of its feet thus partially explaining why it has such a strong desire for frequent baths. Still a third reason may be given, which is the desire to get rid of lice.

Considering these points collectively the pig's actions are easily explained and in addition the fact that a hog wallow is almost indispensable or at least desirable, is strongly emphasized. But along with the wallow must go the adoption of as sanitary methods as possible and in addition a separate supply of fresh water to which access is allowed at all times. As for the mud bath itself, use small quantities of coal oil or a similar material sprinkled over the surface of the water. When convenient change pens or pastures and allow the sun to dry up the old quarters.

If hog cholera should ever come too a farm that farmer will surely realize the effects of poor sanitary methods and the inadvisability of continuing poor practices. Of course conditions are hardly ever very bad when the animals are kept on pasture. Pure water supplied at a rather small expense. Even from the humane standpoint it is no more than right that the pig be given as good water as other farm animals and as good as the farmer uses himself. It will pay when the final returns are considered even if the disease factor is omitted for without question bigger gains will be made in the same time and on the same feed when the animals are contented and in the best surroundings. Provide plenty of shade and pasture, especially alfalfa, and use good feeding methods along with the abundant supply of fresh water and good results will necessarily be obtained.

#### HENS FED BEEF SCRAPS LAY MANY MORE EGGS H. L. Dunster.

Experiment at the University of Missouri shows that protein food increases egg production. That it is a poor policy for farmers not to feed some kind of food to their chickens which is high in protein value—such as beef scraps or sour milk.

A recently conducted experiment goes to show conclusively that protein food produces greater results at lower costs.

In three separate pens the same number of chickens were kept. All were fed corn all of the time, wheat part of the time, and in addition ground grain rations of bran, middlings, and corn meal. Besides this regular feed for the chickens in all three pens, those in pen one were fed beef scraps, and those in pen three were given all the sour milk they wanted. The hens were about the same age. The experiment covered the time between November 1 and June 1.

Those hens in pen two—given only the regular feed—produced only 800 eggs; those in pen one—given beef scraps—produced 1518 eggs, and those in pen three—fed sour milk—produced 1425 eggs. The hens in pen one ate 923 pounds of grain, those in pen two 944 pounds and those in pen three 836 pounds.

The amount of beef scraps feed to the chickens in pen one was 60 pounds, costing \$1.80. These hens produced 718 more eggs than those chickens fed only the regular ration. In other words, these chickens produced 718 additional eggs on feed which cost but \$1.80 more than the regular ration. Those hens fed sour milk produced nearly as many eggs as those fed the beef scrap ration.

Much of the damage that is done to milk is this country is due to careless handling of the utensils in which the milk is kept.

#### WALNUT NOTES FROM

##### CALIFORNIA.

By L. D. Batchelor, University of California, Citrus Experiment Station, Riverside, California.

Walnuts furnish an excellent crop for the upper story of a two storied agriculture. Many of the older groves in California which have trees forty to fifty feet apart show conclusively that half as many trees to the acre would produce as many walnuts with the more perfect development of the trees and also leave considerable space for the cultivation of other crops such as vegetables, small fruits, or possibly alfalfa. The most profitable production of nuts in the future will be experienced where nut trees are grown with companion crops.

Wherever the English walnut will grow it certainly should be used as a shade tree and a lawn tree. It is not unusually in the vicinity of Whittier to see walnut trees in the backyards and on the lawns of residences. In some cases these trees will produce enough nuts to pay one or two months rent, in the case of rented houses, besides filling all the requirements for a first class shade tree in the meantime.

Prospective planters of walnuts should avoid the light sandy soils for this tree. It is the common observation that walnuts on light soils are short lived, have more dead wood in the tops, in some cases cannot withstand the blight as successfully, are more subject to sun scald and in every way lack the vigor and productivity of trees on the heavier loam to clay loam soils.

Much has been written about the heavy production of border trees in a walnut grove compared with the inner trees of the plantation. This difference in production is not only seen in the total volume produced but the nuts are larger on the trees having room for development. It is not unusual to observe the difference on a border tree or row of trees, between the nuts on the outside of the tree away from the grove and the nuts growing on the tree on the inside toward the plantation. The later are frequently not only fewer in number but smaller in size.

#### PRICES 90 YEARS AGO

Following are a few prices of commodities and luxuries prevailing in Ohio nearly a century ago. The prices given are taken from charges in an old "counter book" of 1825-1826:

Eggs, 4c a dozen.  
Butter, 8c a pound.  
Sugar, 10c a pound.  
Pepper, 50c a pound.  
Coffee, 31c a pound.  
Tea, \$1.50 a pound.  
Bacon, 6¼c a pound.  
Whiskey, 25c a gallon.  
Wheat, 40c a bushel.  
Oats, 15c a bushel.  
Corn, 25c a bushel.  
Muslin, 20c and 37½c a yard.  
Calico, 36c and 50c a yard.  
Flowered wall paper, 4½c a yard.  
Salt, 2½c a pound.—Blue Valley Bulletin.

#### IT PROBABLE WAS

One of the big railroad lines has a regular form for reporting accidents to animals on its line. Recently a cow was killed and the track foreman drew up a report. In answer to the question, "Disposition of carcass?" he wrote: "Kind and gentle."

When writing to advertisements, say you saw their ad in the Utah Farmer.



## When You Open Your Preserves Next Winter

they will be full  
flavored and delicious  
—just as they were the  
day you put them up,  
if you seal your  
glasses and jars with

# Parowax

Pure Refined Paraffine

It's the only sure way  
to preserve the full  
goodness of your fruits.  
And it's the easy way  
also. Simply pour  
melted Parowax on the  
cooled preserves. To  
make sure that fruit  
jars are *air-tight*, dip  
the tops in melted  
Parowax.

Guaranteed under the  
Pure Food Law. Your  
grocer sells it.

#### The Continental Oil Company

(Incorporated in Colorado)

Denver Pueblo Albuquerque Cheyenne  
Butte Boise Salt Lake City

#### DAISY FLY KILLER



placed anywhere,  
attracts and kills  
all flies. Neat, clean,  
odorless, conven-  
ient, cheap. Lasts all  
season. Made of  
metallic soapstick  
over; without soil or  
injure anything.  
Guaranteed effective.  
Sold by dealers, or  
sent by express pre-  
paid for \$1.

HAROLD SOMERS, 150 DeKalb Ave., Brooklyn, N. Y.



# Fire On The Farm

Alfred Anderson, Utah, County.

Should a fire break out on your farm what is the first thing you would do. How many farms are there that have any sort of fire protection. The larger cities provide a way to fight fires, the farmer is nearly helpless to do any good in putting out a fire should it get any start what ever. Why—this indifference regarding fires. Must we learn by experience the value of preparation, to cope with a fire when ever it might come to any of us. You may never have had a fire but you can not tell where it will break out next.

Protect your farm with some good system. If a fire is just starting a few buckets of water is very helpful. If the fire has assumed any size, you need pressure to go with the water. You can get this if you have a water tank, you are able to flood the fire and prevent a destructive blaze.

A fire may start in the roof of some of the farm buildings, and for the want of a ladder we are helpless until it has had time to get beyond control.

No home should be without a chemical fire extinguisher. You see them on nearly every fire department wagon. They hold about two bucketfuls of water and when properly adjusted will throw the water about 40 feet. They should be hung in some convenient place known to all and older children drilled how to use them.

Every woman who uses gasoline for any cleaning purpose in the household is handling an exceedingly powerful explosive. Gasoline vapor being heavier than air settles and runs along the floor in an invisible stream, getting into depressions in the floor, and even under it and there will remain for days unless disturbed by an air current. As long as it is there a chance spark may cause this accumulated vapor to explode. It seems hardly worth while to take such a chance when it is so easy to go out of doors to do this kind of work.

Many fires arise from curtains being caught in a burning light, match etc. If this should occur do not try to pull the curtain down; to do so increases the danger of personal injury. Remove near-by objects and as the burning cloth or lace falls to the floor smother the first with a wet broom or a rug.

If the lamp takes fire you must handle it very quickly or let it alone; toss it out of doors if you can; if not throw a blanket or rug over it and get salt, baking powder, or flour; never throw sugar on fire, as this is very inflammable and will burn fiercely. Lamp trouble is often caused by the housewife's filling the lamps after dark by the light of another lamp, or because the air ducts are not kept open to allow a free circulation of air; if these are closed the lamp will heat up when lighted, which is extremely dangerous. And remember that lamps are most liable to explode when only half filled, or when the flame is turned down low in the burner. What is true of an oil lamp is also true of oil stoves.

The majority of women do not seem to realize the danger there is in accumulation in closets. The dust and lint from old clothes are very inflammable. Lighting a match to look for some article in a crowded closet, or taking a candle into such a place often causes fire. Old clothing, rags, waste

paper and every sort of rubbish should be cleared out of closets. A spark in a dusty closet has been known to ignite a whole building; even the accumulation under bureaus and sofas is dangerous. If you do discover a fire in your closet close the door and get a bucket of water and a broom. "A wet broom is the best fire extinguisher ever invented," said an official of the fire department to me. "You can throw a solid sheet of water with it on only a spray; you can beat a fire out with a broom or you can pull down a blazing curtain with it." Use your broom to pull the contents of the closet to the floor and then use it to apply the water.

In putting out a fire throw the extinguishing material at the base; don't waste it on the smoke or flames. If the fire is traveling upward give it one dash at the bottom, then turn the stream to the top and work downward.

Too much cannot be said in recommending the use of safety matches in the home. Though they can be ignited only by being scratched on the side of the box they should be kept out of the reach of the little ones, for children are quick to imitate what they see their elders do.

Even a child can stop a fire in the beginning if he knows what to do. It is a capital idea to increase the presence of mind and the common sense of the whole family by an occasional fire drill. Each one should have confidence enough to attempt to use the means at hand and should be able to summon immediate assistance in case of need. If you have a telephone, put on a card to whom to call for help and let it always be near the receiver, and let everyone in the house understand this card. Should you be caught in a building that is burning and filled with smoke creep along the floor on your hands and knees, covering if possible the mouth and nose with a wet towel. You can always obtain the most air in such cases near the floor.

The great thing to do when a fire occurs is to "keep your head." If soot in chimney burns put some salt or sulphur in fire place. Pour coal or sand down chimney. Don't pour water on burning fat, it spreads the fire, put flour, salt or sand on it, and with a long poker stir the flour into the grease. Don't throw sugar on fire. Never start a fire with kerosene, keep matches out of reach of the children and use only the safety kind. These are only a few of my thoughts about fires, but they may help some one and in this I shall feel repaid.

## Questions and Answers

Murray, Utah.

Utah Farmer:

Dear Sir:—Why is it that young chicks that seem healthy in every way, but have a leg weakness? What is the cause and the remedy?

A Subscriber.

Answered by Byron Alder, Poultryman, U. A. C.

Leg weakness in young chicks is common with young stock that is fed on a ration that is not properly balanced. It consists of too much fattening or forcing feed and not enough bone building material. The chick seems to increase in weight

faster than its strength and the result is a weak-kneed, wobbly bird. This same effect might be brought on by crowding in the brooder, close poorly ventilated quarters and from overeating. The remedy is to watch for the cause and remove it and the trouble will usually disappear.

For feeding chicks that are troubled in this way the weak birds should be removed from the rest of the flock to a place by themselves and a ration composed largely of bran, oatmeal and wheat should be given. Give skimmed milk or buttermilk to drink instead of water and feed plenty of green food. The green food is perhaps the most important measure.

Moore, Idaho.

Utah Farmer:

A number of our chickens have become lame. At first when noticed that they limped they look healthy and combs are bright. They continue to get worse and there foot seems to shrivel some and the cords stiff so they cannot use there feet at all.

Will you please tell us what to do for them and what to do to prevent the same.

J. E. J.

Answer by Byron Alder Poultryman U. A. C.

The trouble that you have may be caused by two or three different things—either by rheumatism, bumble foot, or scaly leg. I would infer, however, from the description you have given that it is scaly leg.

This is a disease which is very common among the larger breeds on the farm. It is caused by a very small insect that works under the scales of the leg, feeding and breeding there until it increases in such enormous numbers as to push the scales off and eat up a large portion of the tissue of the leg. Fowls affected with this trouble have rough, knotty looking legs; the cords seem to draw the toes up until they are hardly able to walk. It is very difficult to cure fowls that are badly affected. However, in the early stages the trouble is quite easily cured. Rub the legs with most any kind of oil or grease after a good thoroughly washing with soap. A mixture of equal parts of kerosene and olive oil is about the best. Apply with a brush or with a sponge. It may take two or three applications, from a week to ten days apart, to thoroughly rid the fowls of this trouble.

If it is bumble foot or rheumatism that is troubling your fowls and caused from unsanitary quarters the remedy would be to clean up the quarters. Keep them as dry as possible. With bumble foot a large swelling appears on the ball of the foot. It is caused by a bruise and may be cured by opening the swelling from the side to let out the pus. Then wash thoroughly with a disinfectant.

## VERY DRY

It is dry in Arizona, very dry. The other day one of the newer of the "dry-farmers" asked one of the pioneer "dryfarmers":

"At what season of the year does the rain come?"

"I don't know," dryly remarked the other, "I've only lived here for five years."

## THE TELEPHONE HABIT.

Jones—"I heard that Smith has had his phone taken out."

Smith—"Yes, he said his wife would phone to the grocer's for eggs rather than go to the hen house for them."



THE OIL PHILOSOPHER

## Threshers Reduce Operating Expense of Oil Engines By Use of Heavy Distillate. —By the Oil Philosopher.

In every gallon of Number One Water White Engine Distillate is contained a greater percentage of heat units than is contained in common gasolines. This means extra power at less expense.

It is the expansion of air in the combustion chamber, occasioned by the heat from each ignition that produces the power. With Number One Water White Engine Distillate, it is possible to use more air, the expansion of which gives added power.

## Number One Water White Engine Distillate

is a heavy gasoline. It is specially made for use in traction and stationary internal combustion engines. With Number One Water White Engine Distillate, a greater load is carried with a more uniform speed.

True, there are as many drops of common gasoline to a gallon as there are of Number One Water White Engine Distillate—but there is a difference in the weight. The combustion chamber will receive as much of one as the other, but the results are different.

The price per gallon in steel drums, F. O. B. Salt Lake, is 10 cents. Samples gladly furnished on application.

## Utah Oil Refining Co. Salt Lake City

### BARGAINS.

One 16-Horse Steam Tractor.  
One 20-Horse Gasoline Tractor.  
Have been used for short time, but are in first-class condition.

Write for price and details.

S. PETERSON & CO.,  
210 So. 6 West, Salt Lake City

### ANSWER

The advertisements in this issue either by asking your local dealer for them, if he does not carry them in stock he may send for them, or you can write direct for catalogue and information. Don't forget to mention the Utah Farmer for we are back of every advertisement that appears in our paper.



# County Fairs

By Ben R. Eldredge.

The season is now on us for the beginning of the County Fairs and though the work should have been started months ago I find in some places the first agitation of the subject for the fall of 1915. It is to be regretted that more and better preliminary work is not done for the average County Fair. This work should be begun for next year immediately after the closing of the present season. A permanent organization should be effected and a good secretary chosen who will work throughout the year as occasion may require for the forwarding of interest in the County Fair. The announcement this fall that a county fair will be held in 1916 gives an opportunity for intending exhibitors to plant their exhibits. We have in every community someone who is more or less a specialist in his line. He is always a strong factor in making up the interesting exhibits at our fairs. When he knows that there is going to be a fair he plans months ahead for his exhibit. Then there are the boys and girls' club who should have early notice of the intention to hold a county fair; that they may plan their exhibits and it may be that the prospect of making an exhibit will be an added stimulus to their efforts in their club work.

The County Fair should be, as well as our State Fair, an educational institution. Every individual in the County should take an interest in it and use his individual efforts toward making it a success. Everyone who has a product that he thinks worthy should plan an exhibit of that product at the county fair, and he should see that it is shown in as good condition as possible. Our livestock should be better fitted this fall than they have ever been before; some of the livestock I saw last fall at the county fairs were in anything but a creditable condition and our calves, yearlings and colts should be halter-broke now so that they may be shown to halter in the show-ring. Strangers often attend county fairs to get an idea of the character of a community as well as of its resources when they contemplate moving into the neighborhood, and when the exhibits are of a character and shown in such a manner that they reflect enterprise, the stranger gets a favorable impression, which often results in his decision to cast his lot with ours, but, if our exhibits are ragged, and of a very ordinary quality he will move on and we will lose the opportunity of gaining a citizen.

At some of our county fairs our large breeders are absent. They think their whole duty is done when they make their exhibit at the state fair. Here they make a mistake for no breeder is so great or strong in the State of Utah that he can afford to pass his own neighborhood or county fair. It is seldom that the county fair date in any way conflicts with the date selected for the State Fair Association. If a man has 25 or 30 head of cattle that he is fitting for the State Fair it is not necessary that he show his whole herd at the county fair immediately before starting for the larger exhibition but he should select a few good animals that are representative of his herd and take them to the county fair, co-operating

with his neighbors in getting together an exhibit that will represent the resources and enterprise of a county where he makes his home.

## STRAW AND MANURE

We are just beginning to realize the value of stable manure. While the market gardener has for years depended upon it for success, the general farmer is just beginning to see its value, and to give it a place in his farming scheme. With its more general use is also coming more care in saving it, without a loss of the ingredients.

The liquid portion of manure constitutes an important part of it. It may be of interest to note that over half the nitrogen and nearly half of the potash produced by horses is in the liquid excrement. Over half the nitrogen from cows is found in the liquid while there is five times as much potash in the liquid as in the solid excrement. Liquid manure from the pig contains one-fifth of the nitrogen and one-third of the potash. Sheep liquid manure contains one-half the nitrogen and two-thirds of the potash. In general it may be said that the liquid manure is as valuable as the solids when we think of the total plant food, but when we consider the availability, we find that that found in the liquid is immediately available, while that in the solid becomes so only slowly. While the nutrients in the liquid are easily available they are very easily lost, and that is one of the big problems we run against in conserving the manure while it is accumulating.

How can we best save it? The first thing to do is to see that the floor of the stable is water tight. Quit using dirt floors. Then catch the liquid. This can be best done by use of an absorbent. Fortunately we have at hand a cheap and an efficient absorbent. We want to keep the animals clean and this absorbent is ideal for that purpose also. I refer, of course to straw. Straw will absorb several times its own weight. In addition to this, it contains valuable fertilizing elements in itself. It contains one-third of the nitrogen, one-fourth of the phosphorous, and three-fourth of the potassium of the wheat crop. With the combination, then, we are returning a considerable amount of fertility to the soil. Certainly there is no profit in burning our straw stacks. That is a practice of fifty years ago, and has no place on the modern farm. It is worth figuring pretty closely whether it is even wise to bale and sell the straw, or sell it to a more progressive neighbor to use as fertilizer on the farm across the road. —Geo. W. Graves, Idaho Experiment Station.

## SHE UNDERSTOOD.

A St. Joseph woman recently engaged the services of a Swede girl as a domestic. The girl asked her what had become of her son. "He has just returned to Yale," the mistress replied, "and I feel lonesome without him." "Ay know yust how you feel," said the Swede servant. "My brother, Hans, has been in yail three times since the Fourth of Youly."—Yale Record.

# FARMERS

Saved More Than

## A MILLION DOLLARS

By Storing In

# Butler Steel Grain Bins

in 1914



**RAT PROOF**—It is impossible for you to figure up with pencil and paper the amount that you have lost by the destruction of grain by rats and mice.

**FIRE PROOF**—Insurance money saved will help you pay for a steel bin.

**WEATHER PROOF**—It is impossible for rain or snow to beat in when properly set up.

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#### ADVERTISEMENTS.

We believe that every advertisement in this paper is backed by a responsible person. We guarantee the reliability of advertisers, but we will not undertake to adjust trifling differences between subscribers and advertisers. This guarantee holds only when written complaint is made to the publisher within one week from the date of any unsatisfactory transaction, accompanied by proofs of swindle and loss and within one month of the date of the appearance of the alleged deceptive advertisement in the Utah Farmer, and the subscriber must prove that in writing to the advertiser he said: "I saw your advertisement in the Utah Farmer."

#### OFFICIAL ORGAN

Utah Horticultural Society, Utah State Dairymen's Association, Utah State Bee Keepers' Association, Bear River Valley Farmers' Protective and Commercial Association, Agricultural College Extension Department and Utah State Fair Association, Utah-Idaho Millers' and Grain Dealers' Association.

When you ask for a change of address always give OLD and new postoffice address.

The man who thinks of the welfare of his animal usually come out best in the end.

Fire destroys thousands of dollars worth of property every year on farms. It may not be your loss today but how soon will it come? Protect your property by using such preventive measures as will help to prevent a fire.

A number of our readers have planted Sudan grass this past year, either in a small way or in large enough acreage to try it out. Write us telling of your experience in growing it. Amount of irrigation or if you raised it without watering. Tell what you know about it so we can help others.

There are a number of advantages in stacking grain. One important reason is that much of the grain threshed from the shock is thrown on the market at once. With our present prospects much wheat is going to the buyers and the prices are sure to be forced down unless the wheat producers protect themselves and carefully study the markets and condition.

How about that silo have you started to build it yet? The good results that will come from being able to feed some ensilage with your alfalfa will please you. Others have tried it here in Utah and every owner of a silo is a booster for them, as far as we have been able to learn. If you

want to know anything about the silo don't be afraid to ask us questions.

It may be surprising to some the great number of gasoline engines that are being sold on the farms. It is one of the greatest labor savers that has ever been invented. It can run a number of different machines on the farm. With a handy man in charge of it will soon pay the cost by the work it will accomplish and the hired help it will save.

#### MOWING THE WEEDS.

When passing thru a farming district in one of our counties we were pleased to see a man with mowing machine cutting the weeds on one of the public highways. We asked him why he was doing it. "Because the county is paying me" was his prompt reply. Farther along we found on other streets that the weeds had been cut. This is very commendable for the county, and they are giving the farmers a good example, to clean up their weeds. We might offer this suggestion, that the work should have been done a little earlier as the weeds are now going to seed. We are glad to know that some people are learning of the good to come from mowing the weeds on our streets.

#### IS ICE CREAM A FOOD?

Manufacturers are making the claim that ice cream is a food. A few years ago the greater part of the "manufactured ice cream" had very little if any cream in it. Things are changing and today you can buy real ice cream.

Only a few years ago we ate ice cream only in the summer, today it has entered into the all-year order of things. The greater demand is still in the summer. It might surprise some of our readers to know the amount of cream used by ice cream manufacturers. When the makers, honestly use enough butter fat in the ice cream to make it valuable for food and the public learn this, farmers will need to take on a few more cows. The consumption of this frozen product at soda fountains, and the ice cream cones for children have wonderfully increased in the last few years because people are beginning to believe that there is a food value in ice cream.

#### MAY PROSECUTE FOR

#### FALSE "ADVS".

The Federal Board are now considering, whether dishonest advertising is a form of unfair competition. If the trade commission decides that dishonest advertising is unfair competition it will be able to strike a hard blow at fake publicity.

For a long time the Utah Farmer has stood for honest advertising. We do not allow any dishonest advertisers

to use our columns. We were the first and are today the only paper or magazine in Utah that guarantees its advertisers to its readers. This is very important to you for we are very careful about who use our paper for advertising. Hardly a week passes but what we have to refuse some one. Besides we do not accept any medical, stock selling or promoting, liquor or tobacco advertisements. We could easily increase our revenues by accepting this kind of copy. For above reasons you can and should support those who advertise in the Utah Farmer, we can recommend them to you.

#### PLANS SAVE MONEY

It is poor economy to believe that you save money to do without plans when you build a barn or home. A well thought out plan, made around the central idea of comfort and convenience, will bring the lumber bill down to a figure that will more than pay for the expense of drafting and other detail work. A plan is more than a few lines drawn on paper. It is the ideas you want worked out in making the building with all the details of material needed. To work without a plan may cause many mistakes the cost of any one, might pay the cost of the plans.

You are able to buy at a lower price when you know exactly what you want and the amount you need. To buy a little at a time, just as you use it, is an expensive way of buying. A person capable of drawing your plans can usually offer many suggestions that will be of value to you, he ought to, for that is his business.

#### FARMERS SHOULD NAME

#### THEIR FARMS.

There is more interest being shown in the naming of our farms this year than ever before. Farms are being named for locality, sentiment, business, and some special industry that may be emphasized upon that farm.

The naming of the farm is the expression of content and happiness. In naming your farm originality is of first importance. Words that go well together without harsh or awkward sounds should be selected. One should be very careful and take plenty of time, and give much thought to this important proposition. It means a great deal to you, and to your children, the future owners of your farm, to have a well selected name; in fact, the members of the family should be consulted before deciding upon a title. The name of your farm is of much more importance than what some people give to the naming of a calf or a colt.

There are some characteristics about each farm that will help suggest a name, or a combination name is often used. Once chosen, the name should become a standard of merit,

and be known for the quality of everything produced upon which the name is placed. A well selected name, with an established record for good quality and honest dealings will add much to the sale value of a farm; but it is unusual for this kind of farms to be sold.

#### BE CAREFUL ABOUT FIRES.

So many newspaper reports telling about fire destroying grain crops, hay, barns, and other farm property have been given in the last week or so that we want to emphasize the importance of being careful, and reducing, as much as possible, the loss of life and property being caused by fire.

Statistics show that the loss, per capita, of the five leading states of Europe, is only one eight the loss, per capita in United States. It is equally as important that we save our dollars as it is that we earn them. Train the children in preventative work; do not allow them to play with matches near the barn, or build bonfires where any danger can come from them. It would seem, from some places, that our supreme effort is to extinguish fires, while that of Europe is to prevent them. When we think of the serious results that come from so many fires, we would use a little more care in preventing them.

#### CO-OPERATIVE MILK

#### CONDENSERIES.

We are publishing this week an article from the United States Department of Agriculture on Co-operative Milk Condenseries, based upon a careful study of the condensed milk industry.

From a number of places in Utah we have heard that factories of this kind are being considered, for this reason we ask that the article be carefully considered.

We are not in any way opposed to co-operative enterprises among our farmers, but on the contrary we favor them. Only by a knowledge of certain conditions can co-operative enterprises be built on a basis of permanency and success. Promoters are always ready to sell machinery and equipment, and from past experiences, do not seem to care much about the permanency of the factory, just a case of selling machinery and getting their money out of it. This is true of different kind of co-operative factories.

The proper location, supply of water, abundant supply of pure milk, and adequate facilities for marketing are all important factors. Sufficient capital for constructing buildings and purchasing equipment and a surplus working capital are necessary. After all these come the proposition of placing the product on the market. If you can provide for all these things then a factory of this kind will be a big help to any community.



# Agriculture Lesson VII

Prof. J. C. Hogenson.

## SOILS, RAINFALL, AREA, CROPS AND YIELDS.

The land area of the U. S. may be divided into two parts, the non-agricultural and the agricultural regions consist of the mountain and desert regions. The surface features of which are either rough and broken or smooth, level sandy or alkali deserts. They are characterized by abruptly rising land masses which may or may not be rocky and wooded. In the Eastern part of the U. S. the mountains are wooded and bounding, while in the Western part they are usually barren, rocky and irregular. The deserts are level and are characterized by a very scant rainfall, and vegetation, a great deal of sand or alkali. It is a safe rule to follow that where vegetation is abundant (grass or sage brush) the level is not desert land but is worthy of reclamation. The agricultural regions comprise those not included in the above mentioned divisions, and consist of those parts where agriculture is or can be practiced.

The area of the agricultural regions of the U. S. may be roughly estimated as 1,810,000,000 acres, of this area 843,000,000 is in farms and 421,000,000 improved land, or about 50 percent improved according to temperature the country may be divided into three regions, cool, temperate, and sub-tropical, the cool, comprises the region north of the 35th parallel of north latitude, the temperate, all the southern portion of the U. S. south of the 35 parallel excepting the southern tip of Florida and a small portion of southern California, which belong to the sub-tropical.

According to rainfall, our country may be divided into three zones. 1st the humid or the region of great rainfall extending from the Atlantic to the Mississippi River. 2nd the sub-humid region comprising a run of states from north to south west of the Mississippi river including, The Dakotas, Iowa, Nebraska, Kansas, Oklahoma, part of Texas, Arkansas. 3th arid region including all states west of the sub humid region excepting the western part of Washington and Oregon.

The area of the humid region is about 550,000,000 acres the area in farms is about 390,000,000. The area improved is about 250,000,000.

The area of the sub humid region is about 507,000,000. The area in farms 360,000,000, the area improved about 143,000,000. The area of the arid region is about 753,000,000. The area in farms 93,000,000, the area improved about 28,000,000, acres, making a total in the U. S. of an agricultural area of 1,810,000,000 acres, area actually in farms 843,000,000 area of improved farm land 421,000,000.

The crops produced in the U. S. May be divided into two general classes, 1st the staple and 2nd, the special.

The staple crops are: 1 corn, 2 wheat, 3 cotton, 4 hay, 5 oats. The twelfth census give a total yield of corn as 2,666,000,000 bushels the average yield per acre as 28 bushel the highest average per acre for individual states was in New Hampshire 42.1 bushels per acre. The states in the great corn belt having high yields are Illinois, Iowa, Indiana and Ohio. The center of production is in north central states.

The total yield of wheat according to the twelfth census is 659,000,000 bushels the average yield per acre was 12.5 bushels of any single state. Nevada reported the highest average yield per acre 24.3, the center of the wheat producing region is western Iowa.

The total yield of oats was 943,000,000 bushels the average yield per acre, was 31.9 bushels. The largest state average was 42.1 bushels in the state of Washington, the center of the oat producing region is western Illinois.

In 1900 the U. S. produced 4,717,000,000 pounds of cotton or 194.3 pounds per acre, the center of production is near Birmingham, Ala.

The total quantity of hay harvested in the U. S. in 1910 was 84,012,000 tons, New York is the greatest hay state producing 7,000,000 tons.

Of the special crops produced in the U. S. we may mention free fruits, small fruits, truck crops, tobacco.

The earliest planting of fruit in America is credited to the Spaniards about 1562. In 1900 there were 367,000,000 fruit trees bearing 212,000,000 bushel, of these the apple is the most cosmopolitan, pear comes next, and then the plum. The total acreage of small fruit is 305,000 having value of \$25,031,000.

The number of acres in vegetables in the U. S. is 5,753,000 the value of it being \$242,170,000. The potato is the most important vegetable grown, having a value of \$99,000,000. New York has the largest number of acres of vegetable crops.

Tobacco, 662,820,000 lbs, or 788 lbs. per acre.

## MEASURING THE

### FARM BUSINESS.

There are three modes of measuring the relative profitableness of farm businesses, involving, respectively, the finding of (1) the farm income, (2) the farmer's labor income, and (3) the farm profit. The farm income is the amount left from the farm receipts after paying all the farm expenses; the labor income, what is left after interest on the farm capital is deducted from the farm income; and the farm profit the balance remaining after a fair allowance for the labor of the farmer is deducted from the labor income. In other words, farm income is balance over farm expenditures, labor income is balance over expenditures and interest, and farm profit is balance over expenditures and interest and the farmer's own time.

Of these three the labor income has been found to give the best index as to the net result of the year's work. It stands for what the farmer has produced by farming or putting capital to work in agriculture. Capital alone can earn interest, and all that the farmer can claim to have produced by his efforts is what he has made over and above what his capital would have earned if safely invested. It therefore seems plain that the most accurate point of view from which to study and interpret the farm records is their contribution to the labor income.

After study of the records, if any changes in the farm make-up are planned, all sides of the effect of such changes should be carefully

## Grain Bags and Twine

We carry a complete Stock of All Kinds of Grain Bags, New and Second Hand

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Can save you money whether you want 100 or 100,000. Samples and Prices on Application

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Nothing to break or get out of fix. Weighs 300 lbs. Does all, and more than the big machines. Pays for itself in a few hours' use. Write for catalog and special introductory proposition.

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# Ditching

## Made Easy

With the Martin Ditcher and Grader

Cuts V-shaped ditch up to 4 ft. deep. Fine for levee work; terracing; cleaning out laterals and bed furrowing.

**Simple—Practical**

Nothing to break or get out of fix. Weighs 300 lbs. Does all, and more than the big machines. Pays for itself in a few hours' use. Write for catalog and special introductory proposition.

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worked out, and it must be borne in mind that sometimes those enterprises that yield small labor income may be very necessary to the farm economy. They may be the only methods by which the waste products, coarse roughage, etc., can be made to yield any income or help to maintain the fertility of the soil. These small yielding enterprises again may give employment to labor and capital during otherwise idle seasons. Radical changes may have far-reaching effects on the entire farm economy through disturbing the relation the various enterprises bear to each other and to the farm as a whole.

It is therefore prudent to weigh carefully and view the farm records from every side before making radical changes in the farming system. Any desired change should be made gradually, for jumping at conclusions is poor business policy in farming.

## A LITTLE SERMON

### ON PERSEVERANCE.

"Could you know the history of the accomplishments of those you envy, you would find that in every one there was a time when all seemed hopeless and at that moment the burden of success fell upon some one man who would not give up.

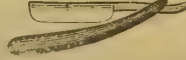
There is nothing so paramount in man's destiny as persistency.

Even luck must be persistently pursued to relinquish its favors.

The ever-present spectacle of one man taking hold where the other faced failure and making good, is example enough to know the value and virtue of persistency.

But yet, like everything else worth while, some one fails to doubt its efficacy.

There is nothing which so attracts confidence as perseverance.



## GREATEST RAZOR

### Offer Ever Made!

Send name and address (no money) and get this highgrade unmatched razor, round or square point, on 20 days free trial. If satisfied it is the best razor you ever used and wish to keep it send \$1.40, if not return it. This razor is made by a secret process that insures a velvet shave.

**D. A. BATEMAN, 230 E. MARKET ST., LOUISVILLE, KY.**

Even ability loses its influence when it is attached to a quitter.

And while it is this which propels men of less accomplishments ahead of men who have greater physical and mental capacity.

Men's results are measured entirely by the will and courage and earnestness with which they pursue the object of their efforts.

Competition is too keen and personality too general to make service felt by one presentation.

No man nor no business can build securely in a hurry.

It is the persistent plug, plug, which delivers success.

Every big job seems at first impossible.

The road to the prize is always a rough one, and sometimes the rougher it is the better is the end of it.

We could not appreciate comfort save for inconvenience.

And no man falls into the lap of luxury without something unsatisfied for which he must strive persistently.

Of all the virtues you can possess, none will bring you the comfort, success, satisfaction and independence as will perseverance.

There is no royal road to anything. The nerve that never relaxes, the eye that never blanches, the thought that never wanders.

Straight on and on and on, there is what you are after and no place else."—Yarns.



## Destroy The Fly

When the modern mother sings "Baby-bye, here's a fly" to her infant, she changes the second line of the old nursery song to read "Let us swat him, you and I." The common house-fly is no longer an object of tolerant interest, but has become an object of hatred and distrust. He is known to be the principal factor in the distribution of the germs of typhoid.

Especially is he regarded as the enemy of the baby, as there is reason to believe that he carries about the germs of summer diarrhea and leaves them behind him, with other filth, when he lights on the nipple of the feeding bottle, or crawls over the saucer of cereal, or falls in the milk. Thus he is a real danger, not only to the baby but to the whole family, and every effort should be made to do away with him.

Flies may be kept out of the house to a considerable extent by using screens at the doors and windows, and those that get inside be trapped, poisoned, or swatted. But better than any of these methods is to destroy the flies in the larval stage, and thus prevent them from hatching. The following information is furnished by the Department of Agriculture:

"A safe and effective weapon against the typhoid or house-fly has been found in powdered hellebore by scientists of the Department of Agriculture. Flies lay their eggs chiefly in stable manure. Powdered hellebore mixed with water and sprinkled over the manure, will destroy the larvae which are hatched from the eggs. Since powdered hellebore is readily obtainable, this puts in the hands of everyone a remedy for one of the pests that has been found dangerous as well as troublesome. Powdered hellebore, however, will not kill adult flies, which must be swatted or trapped.

"It has long been known that flies breed in manure but previous methods of destroying the larvae there by the use of strong chemicals have been open to the objection that the treatment under some conditions lessened the fertilizing value of the manure or actually injured vegetation. This is not true of powdered hellebore. Government experiments have shown that the hellebore is entirely decomposed in the course of the fermentation of the manure and that even in excessive quantities it does no harm except to the larvae it is intended to destroy. Chickens picking in manure treated with it suffer no ill effects.

"One-half pound of powdered hellebore mixed with 10 gallons of water is sufficient to kill the larvae in 8 bushels, or 10 cubic feet, of manure. The mixture should be sprinkled carefully over the pile, especial attention being paid to the outer edges. In most places hellebore is obtainable in 100-pound lots at a cost of 11 cents a pound. This makes the cost of the treatment a little less than seven-tenths of a cent per bushel of manure. A liberal estimate of the output of manure is two bushels a day per horse. The money involved is, therefore, trifling in comparison with the benefits to the individual and the community from the practical elimination of the disease-spreading fly.

"Although fresh manure is the favorite breeding spot, flies lay their eggs in other places as well, such as out-houses, refuse piles, etc. In these places, from which no manure is tak-

en to spread on the fields, considerable saving may be effected through the substitution of borax for powdered hellebore. Applied at the rate of 0.62 pounds per 8 bushels of manure, borax is as effective as powdered hellebore in killing the larvae, but costs less than half a cent for each bushel of manure treated. In larger quantities, however, or when the manure itself is spread at a greater than 15 tons to the acre, some damage to crops may result. Large quantities of manure are often used by market gardeners and others, and there is always danger of carelessness in applying the borax. The use of the more expensive but safer hellebore is therefore recommended for the treatment of manure. Borax is recommended for all other refuse in which flies may lay eggs.

"Scientists who have been working for years to eliminate the fly are convinced that the use of one or the other of these simple measures is a public duty wherever manure and refuse exist. Sanitarians, however, strongly advise the removal of refuse heaps or other unnecessary rubbish or breeding places for flies. In breeding places which cannot be thus disposed of—such as manure or stables—the daily use of powdered hellebore will keep the flies from breeding in these favorite breeding grounds. The best results are obtainable in a community where everyone cleans up his premises, trap or kills the flies, and systematically treats the manure and other breeding places with powdered hellebore.

"The fly is not only a nuisance to human beings and live stock; it spreads disease and filth and is a menace to public health which cannot be tolerated in the face of a demonstrated remedy. Details of the experiments with other information on the subject are contained in a professional paper, Bulletin 245 of the United States Department of Agriculture."

Water supply and sewage disposal are most important factors in the comfort of the farm dwelling. Where these permit, however, it is desirable to have the farmhouse stand in an open location facing the southwest, so that sunlight may enter all of the rooms during the day. An abundance of ventilation is necessary, and in most sections of the country the addition of sleeping porches will be found well worth while. The bedrooms should be large enough to allow each person at least 500 cubic feet of space, and preferably 1,000. In the construction of barns, it may be added, not less than 600 cubic feet should be allowed for each 1,000-pound animal.

### HOW SHE VOTED

At a luncheon in New York Dr. Lyman Abbott, sipping a glass of ice cold milk, told a woman suffrage story.

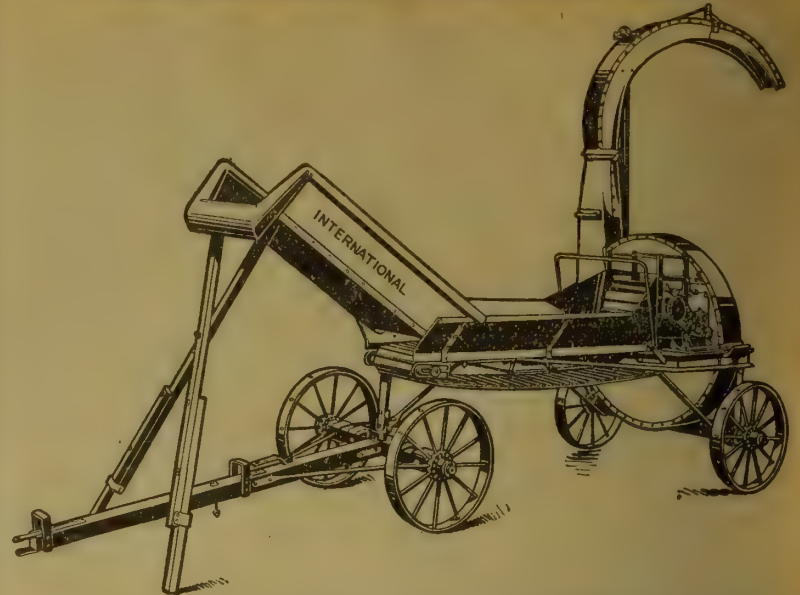
"I had heard a lot," he said, "about the wonderful success of woman suffrage in Australia; so, meeting an Australian woman one day, I asked:

"How did you vote, madam, at the last election?"

"The Australian woman answered with a simper:

"In my manuve pannier gown, sir, with a large mauve hat trimmed with mauve ospreys."—St. Louis Globe-Democrat.

## INTERNATIONAL ENSILAGE CUTTERS



International ensilage cutters grow more popular every day. These are some of the big points on the INTERNATIONAL.

1. There's the famous special concave knife, with inward shear cut, which does most of the cutting near the shaft where the power is greatest. 2. The handy knife grinder that is always on the machine, grinds one of the two sets of knives while the other is working. It's a water stone, leaving the temper in the knives. 3. Perfect adjustment of knife blades to cutter bar can always be maintained, saving power and doing good work. 4. Heavy channel steel frame, trussed, hot riveted, so that working parts can't get out of line. 5. Self-feed keeps cutting always even; silage is cut in lengths from three-eighths inch to over an inch. 6. Blower pipe is adjustable to any angle; silage may be delivered to a silo of any height. 7. Full equipment of safety devices.

These features make the INTERNATIONAL the best to buy. Come in and see the machine or write us for full information.

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## One Taste of Table Queen ---and it's no more home made bread for you

Your grocer can supply you fresh every day with this favorite crusty brown loaf of goodness. Not a bread made—at home or for double the price—has the flavor and is as full of nutriment as

**ROYAL  
TABLE QUEEN**  
"The Best Bread Baked"

Made from a blend of four top grades of flour, and a careful selection of other ingredients; baked to a golden brown in specially constructed ovens, in a most sanitary and scientific bakery; Royal Table Queen comes to you the loaf of bread perfection. It's cheaper to buy "Table Queen" than to bake bread at home. Think of the time and drudgery saved. The folks like "Table Queen" better, anyway.

Ask your grocer about the premiums.



**An Honest Bread at An Honest Price 100% Pure**

**Royal Baking Co., Salt Lake City, Utah**



# The School of Agriculture

Carl L. Anderson.

At the opening of the Utah Agricultural College in 1890 a four-year college course in Agriculture was outlined, together with a three-year course of a more practical nature, and winter course lectures. The four-year college course has been continued from that time to the present, gradually being enlarged and strengthened and the standard advanced along with the rising standards of the institution.

## The High School Students

The three-year course, apparently not satisfactory, was later eliminated, only to reappear as a two-year course

required before entering the college course. The establishment of agricultural courses in the high schools of the state at this time gave the boys an opportunity to get agricultural work at home, and resulted in a rapid decline of the high school enrollment. In 1912 it was decided to eliminate the high school. The first year was dropped in 1913, the second year in 1914, and the third year in 1915.

To provide for special cases coming from districts in which there are no high schools and for mature individuals who wish to obtain a practical insight into scientific agriculture

offered in the high schools of the state.

The high school courses and short courses in Agriculture served a wonderful purpose in stimulating interest in this subject and demonstrating its usefulness. The popularity of these courses in the college and their beneficial effect throughout the state was no doubt one of the important factors of the introduction of agriculture into the high school system. In this way these courses have justified their existence and the money that has been spent upon them. As will be seen by reference to Fig. 3, they are, however, rapidly falling off in numbers, and will, no doubt, within the very near future, practically disappear.

## College Students in Agriculture

The columns in Fig. No. 1 show the total number of graduates of the institution by years, and the black bases the number of these who graduated in Agriculture, while Fig. No. 2 shows the number of agricultural students of college grade for the corresponding years. The college records do not classify the students by courses until 1903, and so we can only judge the number of students in Agriculture by the number of graduates. Fig. No. 1 shows that of the first fourteen graduating classes, from 1894 to 1907 inclusive, only twelve students graduated in Agriculture. Five of these classes contained no agricultural students at all, and at no time was there more than two. During this period one hundred and thirteen persons were graduated, of whom approximately ten per cent graduated in the agricultural course.

By reference to Fig. No. 2 it will be seen that in 1901 the work in Agriculture was put in charge of a committee. In 1903 the departments giving agricultural instruction were organized into a school, and in 1907 the chairman of the committee was made the Director of the School of Agriculture. Fig. No. 2 shows the effect of the interest taken in and the gradual strengthening of the agricultural work. There was an immediate and definite response in the increase in number of college students in Agriculture. In 1907 the agricultural faculty was materially strengthened, the standard of the courses raised, and the institution became an agricultural college in fact as well as in name. The remarkable response and increased number of students is well shown in the chart. The introduction of the three-year entrance requirement in 1911 caused a slight drop for that year. But on the other hand, the change to the full four-year standard in 1914 was followed by the greatest increase shown. This was no doubt largely due to the fact that the high school movement in agriculture, inaugurated in 1911, had prepared a large number of students for this work.

Even more remarkable gains in the number of graduates in Agriculture have been made in the past eight years. Four hundred and twenty-five degrees have been granted, of which two hundred have been in Agriculture, or approximately fifty per cent. When it is considered that the agricultural course is only open to the boys of the institution, it is readily seen that more than half of these are now enrolled in the agricultural work.

## Summary

The closing of the quarter century of agricultural work in the Utah Agricultural College has witnessed a

transition of this course from the weakest in number of students, with a poorly equipped and underpaid faculty, to the strongest course in the institution in both students and faculty. Ten years ago there was one member of the agricultural faculty holding the Ph. D. degree, and there was an average of one graduate per year. Today there are ten Ph. D.'s in the agricultural faculty and an average of thirty-five graduates per year.

Expressed in percentage of the population this means that the Utah Agricultural College has averaged in the last five years almost one student in Agriculture for every thousand inhabitants of the state, and one graduate for every 10,000. This record is much higher than can be shown by any other state in the union.

## Graduates in Agriculture

The final measure of success of any college course is not the number of students, nor even the number of graduates, but the opportunities that it opens up for the graduates—be they few or many—and the influence which they exert on the development of the state.

In the early days of the agricultural course there was little in the way of scientific agriculture; the experiment stations had only just been founded and agricultural research was in its infancy. As the experiment stations developed the fundamental principles, the agricultural courses improved and the student went out better equipped. Gradually agriculture became organized into a science and the opportunities for further development increased. Its transition was slow but certain. The earlier graduates were often compelled to go out side of agriculture to find opportunities, but the change has been so complete that although the number of graduates per year has increased forty times, opportunities have increased still more rapidly. Practically every line of Government work has its share of agricultural graduates. Many are college teachers or experiment station workers; others are high school teachers or farm demonstrators; and an ever increasing number find their greatest opportunity in practical agriculture. Some of the best stockmen, fruit growers, and farmers of the state are college graduates, and, as scientific agriculture develops, openings in these industries will increase rapidly.

## THE PRISONER AT THE BAR.

A man was arrested on the charge of robbing another of his watch and chain. It was claimed that he had thrown a bag over his victim's head, strangled and robbed him. There was so little evidence, however, that the judge quickly said:

"Discharged!"

The prisoner stood still in the dock, amazed at having been given his freedom so soon.

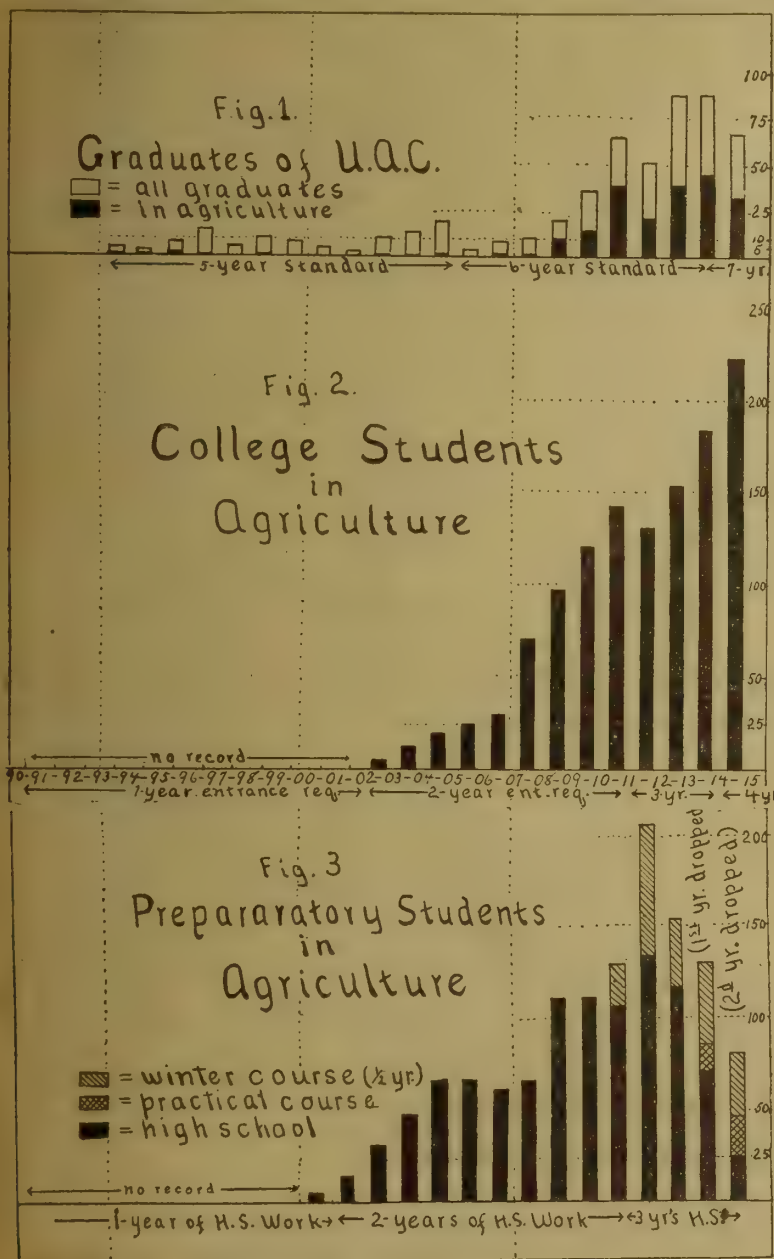
"You're discharged," repeated the judge. "You can go. You're free."

Still no move from the prisoner, who stood staring at the judge.

"Don't you understand? You have been acquitted. Get out!" shouted the judge.

"Well," stammered the man, "do I have to give him back his watch and chain?"—Successful Farming.

Most people who pass a fresh paint sign touch the paint to see if it is still fresh—and leave a mark.



in 1900. This was again changed to a three-year course in 1901, because it seemed more popular. Five students entered the first year, in 1900, the number increasing to 14, 31, 47 and 67 in the four succeeding years, despite the fact that the standard of the institution was raised one year at this time.

Figure No. 3 of Plate 1 gives a graphic illustration of the increase in number of students in the high school course. This attendance reached its highest point in the year 1911-12, when the third year of high school work was

without completing a regular course, a short practical course in Agriculture was established in 1913. No special courses are offered; but these students take the more elementary courses offered to the regular students.

In 1910 the winter course lectures having been shortened into the "ROUND-UP," a half-year winter course was offered for farmers' boys. This developed to large proportions in 1911, but the attendance gradually fell off as agriculture was more freely



# Canning Fruits and Vegetables On The Farm

We give this week some recipes on canning fruits and vegetables taken from the bulletin by C. C. Vincent of the Agricultural Experiment Station, Moscow, Idaho.

## Apples

A great many of our apples may be utilized by canning, as the demand for apples in gallon cans has greatly increased during the past few years. Those best for canning are the tart, late fall, and early winter sorts.

To Prepare—Peel, cut out all decayed parts, core, and cut in halves or quarters. To keep the apples from

No. 10 Cans, 8 minutes at 240 degrees F.

## Loganberries

Wash, stem, and put in cans. Fill with hot syrup. Cap, solder, tip, and process:

No. 2 Cans, 3 minutes at 240 degrees F.

## Peaches

Peaches should be graded very carefully and only those that are just beginning to soften used. When there is only a small quantity of peaches to prepare, peeling may be done with a knife. In the larger factories, lye is

a hot syrup. Cap, solder, tip, and process:

No. 2 Cans, 3 minutes at 240 degrees F.

No. 10 Cans, 8 minutes at 240 degrees F.

## Strawberries

Sort the berries, removing all soft and imperfect specimens. Wash to remove sand, grit, and dirt. Hull and place in cans and fill with a hot syrup of the desired density. Cap, solder, tip, and process:

No. 2½ Cans, 4 minutes at 240 degrees F.

No. 10 Cans, 10 minutes at 240 degrees F.

## Canning of Vegetables

Vegetables, being classed among the staple articles, are the most important packs of the industry. They are, however, more difficult to handle than fruits and require, in many instances, special machinery for commercial canning. In packing vegetables for the trade, the most important thing to consider is quality. The cans should be filled with vegetables of uniform size and ripeness and covered with a brine or salt solution.

Brines of varying percentages may be made by adding salt to water as follows:

1 lb. salt to 12½ gal. water gives a 1 per cent solution.

1½ lb. salt to 12½ gal. water gives a 1½ per cent solution.

2 lb. salt to 12½ gal. water gives a 2 per cent solution.

3 lb. salt to 12½ gal. water gives a 3 per cent solution.

## Cauliflower

To secure a first class canned product, cauliflower should be picked at the proper stage of ripeness. To prepare, the outer leaves are first picked off and the stalk cut close to the head. It is then broken apart and placed in cold water for awhile. This makes it very crisp and tender. Blanch for about three minutes in a bath containing 1½ lbs. salt to 12½ gal. of boiling water, then place in the cans. Fill with a 1½ per cent hot brine solution. Cap, solder, tip, and process:

No. 2½ Cans, 15 minutes at 240 degrees F.

## Corn

In our experiments, corn was the most difficult vegetable to can successfully. The reason for this is largely the fact that corn ferments very quickly, hence but very little time should elapse between the time it is pulled and the time it is placed in the retort.

1st Method—After the cans are filled, and have been properly sealed, place them in the retort and process twenty minutes at 240 degrees F. under a 10-lb. pressure. Remove the cans from the retort and allow them to cool for from five to ten minutes, then prick a small hole in the cover of each can with a small sharp instrument. A damp, cold cloth is placed over the cans which cools them slightly and prevents the steam from escaping. After sufficiently cooled, the vent is resoldered and the No. 2 cans are replaced in the retort and processed 60 minutes at 240 degrees F.

2d Method—By this method the cans are securely sealed, placed in the retort and processed for 60 minutes at 240 degrees F. under a 15 lb. pressure. No exhausting is necessary. Remove from the retort, cool in cold water and set aside for 24 hours. If, at the end of this period, the cans are still bulging, one of two things is true—the cans are too full, or the spores



discoloring, drop immediately into cold water. Now fill the cans, cover with boiling water or hot syrup and cap, solder, tip, and process:

No. 2½ Cans, 4 minutes at 240 degrees F.

No. 10 Cans, 10 minutes at 240 degrees F.

## Apricots

When the apricots are received sort over for even ripeness, size and quality. Wash, cut in halves, and remove pits. Do not peel. Now pack in cans in within ½ inch of the top and cover with syrup of the desired density. Cap, solder, tip, and process:

No. 2½ Cans, 4 minutes at 240 degrees F.

No. 10 Cans, 10 minutes at 240 degrees F.

## Cherries (Sweet)

Select ripe, but not over-ripe fruit. Stem and pick out all leaves and decayed specimens. Wash, place in cans and fill with a hot syrup. Cap, solder, tip, and process:

No. 2½ Cans, 5 minutes at 220 degrees F.

No. 10 Cans, 10 minutes at 220 degrees F.

## Cherries (Sour)

Stem and clean, remove pits and process:

No. 2 Cans, 2 minutes at 240 degrees F.

## Dewberries

It is best to deliver all small fruits in pint boxes. Only berries of good size and firmness should be used. Stem, pick out all trash and inferior berries, wash and place in cans. Fill with hot syrup. Cap, solder, tip, and process:

No. 2 Cans, 3 minutes at 240 degrees F.

## Raspberries

Handle raspberries very carefully. Wash and clean thoroughly. When filling cans, shake several times to insure a good pack. Then cover with

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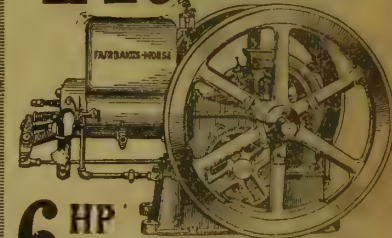
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**Will Saw** heavy cord wood as fast as it can be handled to and from the saw.

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**Will Grind** 30 bushels per hour of small grain, corn on cob or mixed cereals, all ground fine in one operation.

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KEARNS BLDG. SALT LAKE CITY, UTAH  
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Enclose this ad. with your request

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DO YOU MAKE A PRACTICE OF READING THE ADS. WHICH RUN IN THIS MAGAZINE? IT IS MONEY IN YOUR POCKET TO DO SO. ONLY THE ADVERTISEMENTS OF LEGITIMATE FIRMS ARE ACCEPTED. THE WARES OFFERED BY THESE FIRMS ARE INVARIABLY THE BEST. OBTAINABLE AT THE PRICE. IF YOU BUY THEM ONCE, YOU ARE MORE THAN LIKELY TO CONTINUE BUYING THEM. PLEASE NOTE WHAT OUR ADVERTISERS OFFER THIS WEEK. THEN FOLLOW THE ADS FROM WEEK TO WEEK—GET THE ADVERTISING HABIT.

have not been completely killed. If the live spores are causing the trouble, replace in the retort and process the second time for 30 minutes to one hour.

In both of these methods the cans should be immediately cooled after the process. This will prevent the corn from turning brown.

### Peas

In order to put up a pack of excellent quality, the peas should be picked when young and tender. The quality of peas varies greatly with different seasons, also during the canning period. This necessitates close inspection at all times. There must be no delay after picking, as they gather moisture easily and become sour. For handling on a large scale, vining and hulling machines are necessary.

For the home cannery, the following method has proved successful. Immerse in boiling water for five minutes, then rub over a wire mesh, large enough for the peas to fall through into a tub or pail. The peas can be graded by using wire mesh of different sizes. There are six sizes or grades used in commercial factories. For the home cannery, three grades are sufficient: 1st, Standard—Consisting of peas fairly uniform with only a small portion hard; 2nd, Extra Standard—Uniform and of good appearance, liquor clear, and 3rd, Fancy—Excellent flavor, small, uniform, and very tender, liquor clear.

Blanching is accomplished by immersing the peas in boiling water for from one to four minutes, according to the size. They are immediately immersed in cold water to harden them and set the green color. Fill the cans solid to within one-half inch of the top and cover with a plain brine made by dissolving 1 qt. of salt in 50 gal. of water. A sweet brine is sometimes used if the peas are a trifle old or lacking in sugar and is prepared by using 1½ lbs. salt and 2 lbs. of sugar to 10 gal. of water. Cap, tip and process No. 2 cans, 15 minutes at 240 degrees F.

### Stringless Beans

If the beans are packed when young and tender, an article will be secured that will excel in color and quality the commercial product. They should be brought to the cannery as soon after picking as possible for if allowed to sweat, they become tough and lose their crisp, tender nature. Allowing them to stand in cold water for awhile will restore part of their crispness.

Commercial canners divide the string beans into five grades, but for the home canner only two grades are necessary. The different grades are based upon the length of the pods. After grading, wash, break into two to three pieces, and blanch for from two to four minutes. Pack in cans and cover with a hot brine made of 1½ lbs. salt to 12½ gal. of water. Cap, tip, and process No. 2 cans 20 minutes at 240 degrees F.

### Tomatoes

The best canning tomato is one that is picked ripe and fully colored. The inferior, wrinkled specimens should never be used. Better results will be secured if the tomatoes are canned the day they are picked. Place the tomatoes in a wire basket and scald in boiling water for from one to two minutes or for a sufficient period to loosen the skin. To make a firmer pack, they are rinsed in cold water. Peel, remove the core, and pack solidly in cans. They are covered with the juice caused by peeling. Cap, tip, and

process No. 2½ cans, 15 minutes at 240 degrees F.

### Quality of Canned Products

Too much emphasis cannot be laid upon this factor of quality. In the successful operation of a plant of this kind, it is necessary that the quality of the finished product be of the highest grade and character. This is absolutely essential in establishing and maintaining a reputation for goods of a superior quality and is really the foundation for success in the operation of a home cannery. The maintenance of this standard of excellence will be of the greatest aid in selling the product.

That the product of a home cannery can be made much better than the average commercial cannery is readily conceded.

## HOME ECONOMICS ASSOCIATIONS

### General Program Suggestions.

September has been set aside for reorganization in cases where it is desired and also as a time in which to make definite plans for the year's work. The following table may be of assistance in making programs and arranging for active work:

Seasonal Topics	Special Projects
Sept.—School Outfits	Co-operative
Oct.—School Lunches	Laundry
Nov.—Table Service	
Dec.—Entertaining in the Home	
Jan.—Gift Giving	
Feb.—Spring Cleaning	
Garden Making	Town and
Mar.—Bacteriology	Home Clean-Up
Apr.—Canning	
May—Bacteriology	
June—Jelly Making	
July—Picnic and	Mother's
Aug.—Vacations	Vacation

In connection with the foregoing topics a special line of study should be taken. The outline on Home Furnishing and Decoration used in connection with correspondence course No. 11, would be both interesting and instructive.

The following are suggested as possible subjects for the work of special committees:

Program—Outlining programs for the year.  
Membership—Calling on old members. Getting new names.  
Girls' Club—Helping to start the Fall work.  
Civics—Condition of school surroundings.

Entertainment—Special programs for patriotic and other occasions.

Civics Individual Work—Urging the clearing of corrals and repairing of outhouses preparatory to general clean-up.

A sample program for October would read as follows:

Paper. How to make the exterior of our homes more attractive.

Roll Call. A wholesome recipe for a school lunch from each member.

Discussion. The school children, their meals, dress and recreation during the school year.

Lunch Box Social. Members to bring lunches showing neat and attractive packing. This might be held in the evening.

### Co-operative Laundry Project

The advent of the electric washer

(Continued on page fifteen)

## Pattern Department

Full directions for making as the quantity of material required, accompany each Pattern. Price of each Pattern, 10c; no extra charge for postage. When ordering, all you have to do is to let us know your name and address, the number and size of each Pattern you want, enclose 10c for each pattern, and address all your orders to: PATTERN DEPARTMENT, THE UTAH FARMER PUBLISHING CO., UTAH.



6996—Girls' Dress. Cut in sizes 4, 6, 8, 10 and 12 years. The dress closes at the front and can be made with long or short sleeves. Price of pattern 10 cents.

7309—Ladies' Middy Blouse. Cut in sizes 34 to 44 inches bust measure. The blouse slips on over the head and can be made with or without the smocking. Price of pattern 10 cents.

7319—Ladies' Skirt. Cut in sizes 22 to 32 inches waist measure. The skirt is cut in three gores and has inserted side plaited sections. Price of pattern 10 cents.

7320—Ladies' Apron. Cut in sizes 36, 40 and 44 inches bust measure. Linen, gingham or calico can be used to make this apron. Price of pattern 10 cents.

7326—Girls' Dress. Cut in sizes 6 to 14 years. The dress has a tunic skirt and long or short sleeves. Price of pattern 10 cents.

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Mr. Secretary of County Fairs:  
The United Theatrical Association, Bert Christy, General Manager, 714 McIntyre Building, is in a position to furnish you with first class legitimate attraction for your fairs. We have balloon men, aeroplanes, slide for life, high wire, fly trappers, high dive, or any legitimate amusements. Let us figure with you.



## Why Not Keep Breeding Records?

W. E. Carroll.

As a matter of safety most animals should be kept under observation about the time they are to give birth to their young, because if trouble should arise at this critical time it is then possible under these conditions to give aid.

Very few farmers, however, take the trouble to keep accurate record of the date of breeding their female animals so this is possible. As a result they have only a general idea when to expect the young. In some cases where the animals are kept close around the barn this is not a serious handicap, as they can be seen every day and the date of giving birth can be fairly accurately determined. Without this information, however, one is at a loss to know when to bring the animals up from pasture.

For milk cows, it is essential to know when they are to freshen in order to be able to dry them up about

six weeks before this time, as it has been proved that cows do better when given this rest.

With mares, work the last month or six weeks before foaling should be much lighter than usual. It is, therefore, very desirable to know fairly accurately when the colt is expected.

Sows also should be given some preparation in the way of clean quarters, bedding, and feed, just a few days before the litter is expected.

With sheep, less preparation is usually made than with other classes of animals.

A little memorandum book will serve very well to record the dates of breeding. With this information the following table can be used to good advantage in determining when the young will arrive. The table is considerably abbreviated, but from the dates given one can count forward or back and get the desired date.

### GESTATION TABLE

Handy Reference for Stock Breeders

The average period of gestation with horses is 337 days; cattle, 282 days; swine, 113 days; sheep, 148 days.

Date of service	Date on which animal is expected to give birth.	Cow	Sow	Ewe
Jan. 1	Dec. 2	Oct. 8	Apr. 22	May 27
Jan. 15	Dec. 16	Oct. 22	May 6	June 10
Feb. 1	Jan. 2	Nov. 8	May 23	June 27
Feb. 15	Jan. 16	Nov. 22	June 6	July 11
Mar. 1	Jan. 31	Dec. 6	June 21	July 25
Mar. 15	Feb. 14	Dec. 21	July 5	Aug. 9
Apr. 1	Mar. 3	Jan. 7	July 22	Aug. 26
Apr. 15	Mar. 17	Jan. 21	Aug. 5	Sept. 9
May 1	Apr. 2	Feb. 6	Aug. 21	Sept. 25
May 15	Apr. 16	Feb. 20	Sept. 4	Oct. 9
June 1	May 4	Mar. 9	Sept. 21	Oct. 26
June 15	May 17	Mar. 23	Oct. 5	Nov. 9
July 1	June 2	Apr. 8	Oct. 21	Nov. 25
July 15	June 16	Apr. 22	Nov. 4	Dec. 9
Aug. 1	July 3	May 9	Nov. 21	Dec. 26
Aug. 15	July 17	May 23	Dec. 5	Jan. 9
Sept. 1	Aug. 3	June 9	Dec. 22	Jan. 26
Sept. 15	Aug. 17	June 23	Jan. 5	Feb. 9
Oct. 1	Sept. 2	July 9	Jan. 21	Feb. 25
Oct. 15	Sept. 16	July 23	Feb. 4	Mar. 11
Nov. 1	Oct. 3	Aug. 9	Feb. 21	Mar. 28
Nov. 15	Oct. 17	Aug. 23	Mar. 7	Apr. 11
Dec. 1	Nov. 2	Sept. 8	Mar. 23	Apr. 27
Dec. 15	Nov. 16	Sept. 22	Apr. 6	May 11

## Market Prices

### Local

The quotations given below are what is being paid f. o. b. Salt Lake City. We find that a difference of 5c to 10c a hundred is paid by the millers or grain buyers in other parts of the state.

Wheat, soft, white—\$1.50 cwt.  
Wheat, Turkey Red—\$1.55 cwt.  
Oats—\$1.40 cwt.  
Barley—\$1.05 cwt.  
Rye—\$1.15 cwt.

### Hay

Alfalfa—\$10.00 ton baled.  
Eggs—\$6.00 case 30 dozen.  
Butter Creamery 29c.  
Butter Ranch 25c.

### Chicago Market.

Reports that foreigners are heavy buyers of wheat gives strength to the market.

Wheat—No. 2 red, \$1.16@1.19; No. 2 hard, \$1.20@1.28.  
Corn—No. 2 yellow, 82@82½; No. 4 white, 81c.

Oat No. 2 new white, 51c@52c.  
Oats No. 3 old, 60c@62c.

### LIVE STOCK

#### Kansas City.

Hogs—Higher, bulk, 7.50@7.50;  
Hogs—\$6.50@7.50, packers and butchers, \$6.10@7.50, light, \$7.25@7.50;

pigs, \$6.75@7.40.

Cattle—Steady; primefed steers, \$9.50@9.95; dressed-beef steers, \$8.00@9.50; western steers, \$7.00@9.25; bulls, \$5.25@6.75; calves, \$6.00@10.25.

Sheep—Lower; lambs \$8.25@8.75; yearlings, \$6.75@7.50; wethers, \$6.25@7.00; ewes, \$6.00@6.75.

### Portland Market.

Hogs—\$7.20@7.30.  
Steers—\$6.50@7.00.  
Lambs—\$6.50.  
Ewes—\$4.75.

—O—

### PUT IT UP TO PROVIDENCE.

Wheeling, W. Va., judging from an appeal made to Providence by the evangelist Billy Sunday, is in a bad way.

In the course of the closing prayer at one of the revival services recently held in that city, Mr. Sunday asked a special blessing for everybody and everything in Wheeling, and in reference to the city council gave the Almighty the following information and advice: 'God bless the members of the city council. Oh Lord that's a tough bunch, if there is any bunch on earth that needs Thy assistance and aid, it is the council of this city. Reform them, O Lord! I know that I am asking You to do a hard job and I advise You to get a pair of rubber gloves and a bottle of disinfectant before you start.'

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Attending School At The  
**HENAGERS BUSINESS COLLEGE.**



PAULINE MARRIOTT



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The students of Henager's Business College have won all cups and medals for the past three years. If you want to be a winner you should attend our school.

School is in session all the year and new students may enter at any time. Positions are guaranteed to all graduates.

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## Henager's Business College

HENAGER COLLEGE BUILDING  
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Farmer Friends, Listen to This

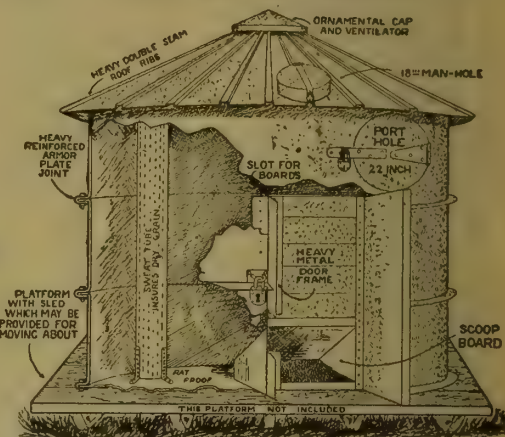
Last year the minute grain was harvested the majority of farmers let go of their crop. Let a young fortune, in many instances slide through their fingers. A couple a months after they had sold their grain the price climbed to nearly double what they received when they sold. But farmers are wiser this year. Once caught—twice shy! This year they'll store their grain in a Columbian Grain Bin. They'll hold their crop until the "Big Price" comes 'round. Then they'll sell.

### "BUY A BIN" MOVEMENT SPREADING

You farmer friends of ours who haven't yet bought your bin, make haste and secure it. The cost is little. That is, if you buy it from us. Why, a few cents advance in grain prices will pay for it. Write today for price and details.

### THE GREAT COLUMBIAN BIN

You've heard about this bin. America's largest metal bin manufacturers make it. It's theft proof,



The Columbian Bin—Write for Descriptive Folder and Price.

rat proof, storm proof. Heavily galvanized so it won't rust. Built extra heavy and strong throughout. A postal will bring you full particulars.

### THE LOWEST PRICE OBTAINABLE

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**S. PETERSON & CO.**  
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## Water On The Farm

No questions are of greater importance to the farm family than the farm's water supply and the disposal of its sewage. The prospective builder should make certain that these problems are solved before he does anything else, for they lie at the foundation of the entire household's health and comfort.

Purity and abundance are the two essentials of water supply. Ordinarily, it has been calculated, each person on a farm will require 30 gallons a day, each horse from 10 to 13, each cow from 10 to 14, each hog from 1 to 3, and each sheep 1 gallon. If greater quantities are obtainable, so much the better.

Wells and springs are the usual sources of farm water. Both may easily be contaminated, and the vicinity should, therefore, be inspected for possible sources of pollution. In some cases typhoid epidemics have been traced to springs which have become polluted through fissures in the rock strata. Contamination may also reach well water through uncemented joints in the masonry, and for this reason it is always well to cement the joints for a considerable distance from the top. Surface contamination can be guarded against by the erection of a suitable concrete curb.

Once an abundance of pure water has been secured there is no single improvement which will add so much to the comfort of the household as some mechanical system of making it readily available. Where the supply is obtained at an elevation above the house the matter is comparatively simple. A tank or reservoir can be built and pipes run down from it, through which the water will flow by gravity and from which it can be drawn at will. In the majority of cases, however, before the force of gravity can be utilized it will be necessary to pump the water into an elevated tank. Unless this is in the house itself it is likely to freeze during severe weather and cause trouble.

Of the various methods of elevating water the windmill is perhaps the most satisfactory in the majority of cases. Its first cost may seem rather high, but after it is once erected it costs little to operate and maintain. On the other hand, a large storage tank is a necessity as a precaution against long periods of calm weather when no wind blows and the mill stands idle. Water stored in this way becomes warm in summer and in winter is often too cold to give to stock.

The storage difficulty does not exist when the gasoline engine is used, but the engine has its own drawbacks. Although it does not cost as much to install as a windmill, its operating cost is considerably greater, depreciation is more rapid and expensive repairs are required more frequently. A 1½ to 2 horse power engine, however, such as is generally used for pumping water, may be used advantageously for many other purposes on the farm as well. Air-cooled engines are recommended when the pumping is intermittent, for they will not freeze in winter. When steady, uninterrupted work is expected, and there is, therefore, no danger of freezing, water-cooled engines are to be preferred.

The pressure or pneumatic tank has the great advantage of enabling modern bathrooms with good water pressure to be located in any part of the

premises. The tank also can be placed in the cellar and thus protected from danger of freezing. Under this system, water is pumped in against air pressure of from 40 to 50 pounds a square inch. The chief objection is the initial cost, which is always high.

Under favorable circumstances a ram is an economical and convenient means of elevating water. The ram, however, is not what in mechanical language is known as "efficient," and, in consequence, there must be a large surplus of water before it is a feasible device. Under this system the necessary power is derived from the downward flow of the water itself, which is so controlled that it enables the ram to elevate a certain portion of it into a storage tank. Much is wasted in the operation, however. Under certain circumstances this may be partially remedied by having the power furnished by the flow of other water.

On the ordinary farm, unless the sewage is disposed of properly, there is danger that the water supply may be polluted. Where privies are in use, they should be located so that no drainage from them can reach the source of water supply, but they should also be readily accessible. The ultimate disposal of the sewage may be accomplished in several ways.

A common but dangerous practice is to discharge it into a convenient stream. This may easily start a typhoid epidemic farther down the stream and should not be encouraged. Surface irrigation over the land is better, but here again care must be taken to prevent the infection of articles of food, such as lettuce, which are eaten raw. More satisfactory results are usually obtained from cesspools, and the "leaching cesspool," in which the sewage percolates gradually through porous material, has often proved successful. Such a cesspool may, however, be extremely dangerous if located in the path of ground water flowing toward the well. Septic tanks also have a number of important advantages, but it is usually desirable to use filters in connection with them. Subsurface irrigation is also common in connection with a septic tank.

A man who had never been duck hunting shot at a duck in the air.

"Well, you got him!" exclaimed the amateur's friend.

"Yes," replied the amateur, "but I might as well have saved my ammunition—the fall would have killed him."

### WHEN SHE WOULD BE BACK

"I saw your mother going to the house next door, just as I crossed the street," said the caller to her friend's little son. "Do you know when she will be back?"

"Yes'm," said truthful Tommy. "She said she'd be back as soon as you left."

### NOT EXEMPT

An evangelist at a church in a Western town was exhorting his hearers to flee from the wrath to come. "I warn you," he thundered, "that in the language of the Scriptures 'there will be weeping and gnashing of teeth.'"

At this point an old lady in the gallery stood up. "Sir, I have no teeth." "Madam," returned the evangelist severely, "teeth will be provided."

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**The Utah Farmer**  
Lehi, Utah



# Lesson In Sewing

## LESSON IV.

### A Kimono.

#### Cutting a Kimono Pattern.

Supplies:—Manila paper, 14 by 12 inches. Lay the paper on the desk with the 14-inch edge lengthwise. Fold the paper, bringing the 14-inch edges together, and crease it through the center. Fold it again from left to right. Place the paper on the desk with the double edges the left and toward the lower edge of the desk.

#### Guide Points.

Dot A.  $4\frac{1}{2}$  inches up from the lower righthand corner on the right-hand edge.

Dot B.  $\frac{1}{2}$  inch to the left of A.

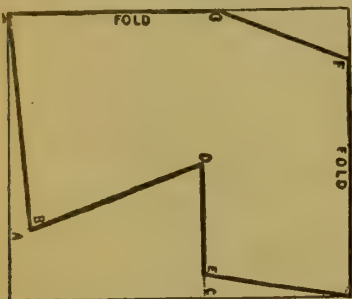
Dot C. 3 inches to the right of the left fold edge on the upper edge.

Dot D.  $2\frac{3}{4}$  inches down from C and on a straight line with C.

Dot E.  $\frac{1}{2}$  inch below C on the line to D.

Dot F. On the left folded edge 1 inch up from the lower edge.

Dot G. 3 inches from the left fold edge on the lower edge.



#### Outline of Pattern.

Draw a slanting line from B to the lower right-hand corner. Draw a slanting line from D to E. Draw a straight line from D to E. Draw a slanting line from the upper left-hand corner to E and from G to F. Cut on these slanting lines and on a straight line from D to E. Open the paper once and cut from G to F and on the folded edge to F. Open and fold once lengthwise. Cut from G to the lower edge for a front opening.

#### Cutting and Making the Kimono.

Supplies:—Figured Lawn, 14 by 12 inches; White Lawn, 9 by 9 inches (for a bias facing); White Cotton, No. 70; Needle, No. 9; etc.

Fold the material once, bringing the 14-inch edges together. Fold the pattern lengthwise through the center. Place the back and front edges on the fold of the material. Pin carefully on all edges and cut the kimono.

Sew the underarm and sleeve seams with French fell seams.

Cut the nine-inch square of lawn line two-inch bias strips for facings. Sew the facings on the right side of the garment on all the edges of the kimono. Turn the facing to the wrong side and hem in directly over the seam. This will make a band three-quarters of an inch in width serving as a finish to the edges and also as a trimming.

#### Mitering Bias Facings.

These facings are to go used as bands. When turning a corner with bias facings, sew the facing to within a quarter of an inch of the left edge of the corner. Secure the thread with one or two backstitches, but do not break it off. Run a seam halfway across the facing on a straight thread of goods. At the center of the band turn the seam at an angle, following a straight crosswise thread.

This seam will form a triangle the apex of which should point to the left and come in the center of the facing. Fasten the thread and trim off the seam of the triangle and eighth of an inch from the sewing.

Begin at the corner of the garment and continue seaming on the facing. This method will miter the corner on both sides of the facing.

Note: There is a difference between a facing extending beyond the garment like a band, which requires mitering on both sides, and a facing sewed flat on a garment like a false hem which only requires mitering on one edge.

When facing a kimono, begin at the back of the neck, sewing the band even with the garment around the neck. The corners at the front of the neck may be slightly curved. Sew the facing on without fullness at these curves. If necessary, make a small plait at the point of the front neck opening. When the facing has been sewed almost all the way around the garment, calculate the amount needed to finish. When near the end, sew a seam. Open this seam; turn down a quarter-inch fold at the edge of the facing and baste over the seam. This facing must lie perfectly flat and smooth. Do not sew the stitches through the right side when hemming it down. When the facing is finished, turn it over half-way at the neck to form a collar.

A line of feather-stitching near the edge of the garment on the facing makes an attractive trimming for a kimono.

### SUGGESTIONS FOR THE POULTRYMAN.

If you want to get the best results from your chickens you must give them attention.

You must keep your hens in good health, providing coops that are clean and well ventilated, and allowing the chickens the run of orchard or pasture through the day.

You must feed your hens well for growth and development. They should go to roost with crops well filled with wholesome grains, after returning from the range, and plenty of skim milk and water should be available through the day.

You must see that your hens have shade in which to rest. If trees and shrubs are not plentiful, burlap or gunny sack shades should be put up.

You must keep your broody hens in airy coops and feed and water them well. They will recover from their broodiness in five or ten days.

You must gather your eggs daily and market them at least twice a week.

### GOOD LIVE STOCK

It makes farming permanent.  
It returns highest price for farm crops.

It furnishes market for waste feeds.  
It reduces bulk of marketable crops.

It distributes labor throughout the year.

It means cleaner farms.  
It makes income steady.

It helps to keep boys on the farm.  
It makes farm life more pleasant.



**REST A WEEK**  
or so at the Beaches  
Long Beach—Venice  
Catalina  
Then see the  
Expositions.

Three Daily Fast  
Trains leave Salt  
Lake City 8:45 a. m.  
1:00 p. m. 5:00 p. m.  
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or San Francisco  
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\$62.50 to Los Angeles  
Return via  
Portland  
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Go via  
Los Angeles  
to the  
Expositions

# Summer Excursion

Via



Following Rates Apply From Salt Lake City.

### EAST

Denver .....	\$22.50
Colorado Springs.....	22.50
Omaha .....	40.00
Kansas City.....	40.00
St. Louis.....	51.20
Memphis .....	59.85
Chicago .....	56.50
Minneapolis .....	53.85

Correspondingly low rates to many other points.

### SELLING DATES

August 4, 11, 18, 25;

September 1, 8, 15.

Limit, October 31.

Stop-overs; Diverse Routes.

Proportionately low rates from other Oregon Short Line Stations—See agents.

**HOTEL UTAH**  
City Ticket Office

### WEST

Portland .....	\$37.00
Seattle .....	44.50
Tacoma .....	42.80
San Francisco, via Ogden,	35.00
do. one way via	
Los Angeles.....	35.00
do. one way via	
Portland .....	53.50
Los Angeles, via South-	
ern Pacific .....	40.00
do. one way via	
Salt Lake Route.....	35.00
do. one way via	
Portland .....	62.50

Side trip rate Los Angeles to San Diego and return via rail \$5.00, and via steamer \$4.00, in connection with circuit tour tickets.

Tickets on sale daily to November 30, 1915, inclusive.

LIMIT, three months from date of sale, but not to exceed December 31, 1915.

### NORTH

Excursions to northern Utah and Idaho points, August 14, 28; September 11, 25.



For the Buyer

# THE FARMERS' MARKET PLACE

For the Seller

## THE GEM HERD.

Improved Chester White Swine  
The Home of the Western Prize Herd  
My winnings at Idaho State Fair 1913,  
were 13 first, 3 seconds, champion boar  
and sow, and champion fat barrow.  
I took all but one second. I have any-  
thing wanted in Chesters from a wean-  
ing pig to a champion boar or sow at  
prices all can afford. High class stock.  
Write me.  
For Reference—all old customers.  
**GEO H. LAWSHE.**  
Falls City, Idaho

WANTED—To buy from grower, as  
soon as new crop is harvested for 1916,  
red—500-1000 bushels field peas.  
State kind and price.

**OWEN G. ARNOT**  
Nevada

## WHY NOT ADVERTISE?

If you have some pure bred stock  
and want to sell them, why not use  
a little advertisement on this page?  
It will bring results. Try it.

## BUTTER WRAPPERS

We carry a large stock of the Best  
Vegetable Parchment Butter Wrap-  
pers and Especially Prepared Ink for  
printing the same. We furnish them  
Postage Prepaid at the following  
prices, money to accompany order.

100	\$ .90
200	\$ 1.25
500	\$ 2.00
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Send all orders to  
**THE UTAH FARMER**  
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SELECT YOUR DUROCS NOW  
We have 200—Take your choice  
SPRING LAKE STOCK FARM  
PAYSON, UTAH

## Sheep, Cattle Stallions, Jacks

FOR SALE

Pure bred Cotswold's, registered and non-  
registered, in small or large lots.  
Registered Shorthorns. Beef and milk  
strains

**ROOSEVELT LIVE STOCK CO.**  
CLEVELAND, IDA.

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YOU CAN PAY OFF THE PRIN-  
CIPAL GRADUALLY.

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FARMS LOANS  
803-7-Keams Bldg.  
Salt Lake City.

Wanted to hear from owner of good  
Ranch for sale. Send cash price and de-  
scription. D. F. Bush, Minneapolis, Minn.

## HOLSTEIN BULLS FOR SALE.

Heering a Count No. 57541. Best,  
Utah owned Bull at State Fair 1914,  
and 5 of his sons. Pure Bred and  
Registered.

**VERNE BARTHOLOMEW**  
Fillmore Utah

## HOME ECONOMICS ASSOCIATIONS

(Continued from page eleven)

has lessened the labor of wash day,  
but the ironing still remains. It is  
true that ironing mangles are used in  
some of the wealthier homes, but the  
majority find them beyond their  
means. The problem has been solved  
in some states by the co-operative  
laundry. In place of expensive equip-  
ment being placed in individual homes,  
it is subscribed for by shares of stock  
and the plant owned by the commu-  
nity. Even in cases where electric  
washers have been installed to a con-  
siderable extent, a community ironing  
mangle could be put in some central  
place and relieve the homes of this  
burden. A heated mangle run by  
electricity costing from one hundred  
seventy five to two hundred dollars  
would iron all the flat pieces and  
most of the body wear. A cold mangle  
costing from forty to fifty dollars  
would iron all flat pieces. Minnesota  
and Wisconsin have profited by this  
scheme for some time. In these states  
the laundries are run in connection  
with a creamery or cheese factory.  
Note the report received from River  
Falls, Wisconsin, in which a laundry  
had been running less than a year  
and think whether it would be pos-  
sible for your Association to do any-  
thing towards taking this work out  
of your home.

Building used: A vacant building  
purchased for \$1000.

Location: 100 feet from the Cream-  
ery. The same heating plant is used  
for both.

Organization: Incorporated for  
\$6000. Shares sold at \$10 each. It is  
suggested that all capital stock be  
collected before laundry is started.

Management: Board of five, three  
men and two women. It is suggested  
that three on Board would be prefer-  
able.

Operating Expenses: About \$107  
per week. A manager, \$25 per week.  
Steam and heat, \$4.00 per week. Ironer  
\$12 per week. Girls \$6.00 per week  
Two men \$10 per week.

Earning Capacity: \$142 per week,

## RICHARDS DEFENDER

The Sire of Durocs With Immense Size, Extreme Length and  
Bone Excellent Feet.

250 Choice March and April Pigs ready for delivery now. Can  
furnish Boars and Sows not related to each other.

Also a few Choice Sows bred to RICHARDS DEFENDER and  
VIRGINIA ILLUSTRATOR, a Giant Son of the 1000 Pound Illinois  
Grand Champion ILLUSTRATOR, who sold for \$2000.00.

When you buy Durocs buy from an old and reliable firm who  
guarantee to please you or refund your money.

## RICHARDS LIVE STOCK CO.

Successor to Richards Brothers.

VIRGINIA

IDAHO

with exception of increase during  
warm weather.

## Notes of Interest to the Associations.

It seems to be fitting at this time  
to compliment the Associations upon  
the splendid work of the past season.  
There are up to date seventy Home  
Economics Associations in Utah, with  
a membership of nearly three thou-  
sand. Upon looking over the reports  
we found that regular meetings are  
held by nearly all Associations during  
the greater part of the year, and that  
at those meetings, in nearly every  
case some definite line of study is be-  
ing followed. We are glad to note al-  
so that the free correspondence  
courses are being quite widely used.  
The committees are nearly all engaged  
in active work, especially along the  
lines of civic betterment. Eight  
Associations sent in reports of their  
part in town clean-ups, and we know  
that there are similar movements un-  
reported.

It will be a welcome piece of news  
to the Associations to learn that there  
are to be two home demonstrators in  
the field this year, Miss Hettie White,  
agent for the southern counties, began  
her work in Millard County in July.  
Miss Blanche Cooper, agent for the  
northern counties, will begin work in  
September, the exact location to be  
decided on later. Both are mature  
women of great practical as well as  
scientific experience.

## CHILE SAUCE RECIPES.

The following recipes will be found  
useful in preparing a popular and  
economical sauce:

### Recipe No. 1.

Scald and peel sound, ripe, red to-  
matatoes. Chop into small pieces by  
pressing through a half-inch screen or  
by running through a coarse meat  
chopper—

36 pounds of tomatoes.

2 pounds of chopped onions.

10 ounces of ripe bullnose peppers  
(after stems and seed have been  
removed).

The bullnose peppers should be hot  
enough to give the proper flavor to the  
sauce. In case they are too mild, a  
small amount of cayenne should be  
added. A pound of the large sweet,  
or Chinese, peppers, if they can be  
had, will also add richness and color.  
Put into a granite-ware or enameled  
kettle and concentrate to 18 pounds.  
Because of the tendency to settle on  
the bottom of the kettle and burn, it  
is a good plan to allow the tomatoes  
to stand for a few minutes after  
chopping, during which time consid-  
erable juice will separate out. This can  
be poured off and placed in the kettle

and concentrated before the rest of  
the above ingredients are added.  
After concentrating to 18 pounds, add  
2¼ pounds of cider vinegar and 9  
ounces of salt.

Concentrate further to 18½ pounds  
and add 6 pounds of sugar. Boil slow-  
ly 5 to 10 minutes. Put into jars that  
have been washed in boiling water  
and seal while hot. The above quan-  
tity will yield about 23 pounds, or suf-  
ficient to fill 18 to 20 pint jars.

Throughout the boiling care must be  
exercised by stirring to keep the in-  
gredients from settling to the bottom  
and burning. This is especially nec-  
essary after the sugar is added. In  
order to weigh the contents of the  
kettle at different stages in the pro-  
cess of concentrating, the weight of  
the empty kettle should be noted at  
the start. The kettle, with its con-  
tents, can then be set on the scales or  
hung on the balance from time to  
time without inconvenience, and the  
weight of the contents easily deter-  
mined. This sauce is not likely to  
mold; but, as a precaution against  
spoilage, it is advisable—after filling  
the jars and putting on the rubbers  
and tops—to place them in the clothes  
boiler and sterilize them for about 30  
minutes. If this sauce is properly  
made, it will have a bright red color  
and a rather mild and sweet taste. It  
is delicious when served with meats,  
oysters, baked beans, etc.

### Recipe No. 2.

For those wishing a sauce not quite  
so sweet, but more on the order of a  
pickle, the following recipe will be  
found satisfactory: Scald and peel 24  
ripe tomatoes; chop these up with 2  
red bullnose peppers, 2 green bullnose  
peppers and 2 large onions. Put into  
an enameled saucepan and add—

4 cups of vinegar.

1½ cups of brown sugar.

2 level tablespoonfuls of salt.

2 level teaspoonfuls of whole allspice.

2 level teaspoonfuls of whole cloves.

2 level teaspoonfuls of cinnamon.

2 level teaspoonfuls of ground ginger.

2 level teaspoonfuls of ground nutmeg.

Bring to a boil, stirring frequently  
to prevent scorching, and boil until  
the sauce begins to thicken. The  
onions will then be well done. This  
should not take over an hour. Re-  
move the vessel from the stove, put  
the sauce into jars, and seal while hot.  
This will keep in a wide-mouthed  
bottle if it is well corked and dipped  
in paraffin.



## Local Thunderstorms

"Heat" Thunderstorms Difficult to Forecast—Caused by Atmospheric Conditions Over Small Territory.

One afternoon a short time ago a thunderstorm with quite a heavy down-pour of rain occurred over a portion of a certain county in the West. The shower had not been forecast by the Weather Bureau, and a few days later a letter of complaint was received, the writer stating that the storm had ruined a considerable acreage of cut alfalfa that had been allowed to lie out to cure, as the weather forecast had said nothing about showers.

Be that as it may, the science and art of weather forecasting never have been and never will be reduced to the basis of absolute certainty. The very operation of the natural laws of the universe preclude this, and with no type of weather is this impossibility or exact forecasting more in evidence than in the case of thunderstorms.

The forecasting of general thunderstorms over large areas is not so difficult, as these generally occur when, after a heated period a large area of high barometric pressure with a pronounced fall in temperature follows the heated period, bringing with it thunderstorms and later a cool and clear period of at least several days' duration.

But there are other thunderstorms, occurring during periods of abnormal heat, that are caused by excessive air convection—that is, by the upward movement of air masses that are unduly heated by contact with the warm earth. These are carried upward to such an elevation that they become cooled by expansion to an extent that lowers the temperature of the warm air masses below the temperature of condensation, and rain therefore occurs.

These "heat" thunderstorms are frequently very local in character, as certain portions of the earth's surface become hotter than others, and consequently a "heat" thunderstorm often occurs in one locality, whereas only a few miles, or even a shorter distance, away there will be none at all. It is not an infrequent occurrence to have a severe thunderstorm over one portion of a large city while over other portions there will be none. It should also be added that these "heat" thunderstorms are usually followed by a quick return to the some heated conditions that preceded them, indicating a merely temporary disturbed condition of the atmosphere without prospect of permanent relief until the appearance of such a cool, high-pressure area as has been mentioned above.

Silo filling time will soon be here and then the farmer needs plenty of help but at the same time it is not necessary to have an over-supply. It is better to go a little slowly than to try to rush the work through and do it without getting as much into the silo as it will possibly hold. Make the silo just as full as it can be made and do it by allowing it to settle and pack thoroughly.

"What is an angel, mother?"

"Why, dear, it is a beautiful lady, with wings who flies. Why do you ask?"

"Because I heard father call my governess and angel."

"Oh, well, you watch her tomorrow and you'll see her fly."



## Another Extra Special Bargain

Latest style, 88-note, plain mahogany case

## Kimball Player

Bench, scarf and 25 rolls.

# Now \$357

Delivered to you on a payment of  
\$15.00 DOWN—\$10.00 MONTHLY.

This is only one of the great number of the bargains that we offer you now during our Annual Kimball and Second-Hand Sale. Remember our entire stock of Kimball Pianos and Players is put in this sale at about half their regular price. All our second-hand, returned from rent, repossessed, rebuilt and slightly used pianos and player-pianos are included and marked down to the zero mark. Most of the used upright pianos have been turned in on Pianola Pianos and Steinway Grands. They come from good homes and you get exceptional value at the prices they are now marked. Call today while the selection is good. Just the piano you want is here NOW, and offered to you at a price of from one-third to one-half less than you expected to pay for it.

## An Idea of How They Are Going

Pease, mahogany case.....	\$ 95
Antisell, ebony case, upright.....	\$ 34
Kingsbury, oak case.....	\$118
Renique, walnut case, upright.....	\$ 30
Kimball, walnut case.....	\$190
Newton, mahogany.....	\$235
Estey, mahogany.....	\$250
Jessie French, mahogany.....	\$240
Model, upright oak.....	\$ 45
Kimball, mahogany, like new.....	\$245
Whitney Player, 88-note.....	\$250
Stoddard Player, 88-note.....	\$235
Sohmer Cecilian Player, 88-note.....	\$495

Terms as low as \$5.00 monthly.

ABOUT THE TERMS—You do not have to pay cash. We would like to have the cash, of course, but we know there are many homes that would appreciate the benefits of a good piano who could not spare the cash now, so we are going to offer the very easiest kind of payments. Uprights will be sold for as low as \$5.00 per month and players as low as \$10 per month. Any reasonable terms will buy a piano here now.

WRITE US TODAY FOR A DISCRIPTIVE LIST

Every  
Instrument  
Fully  
Guaranteed

Baldwin  
Upright,  
Just like  
new—  
**\$345**

Select a  
Player or  
Upright

\$900  
Apollo  
Player,  
New latest  
style—  
**\$590**

now—make your first payment in September

MAIL THIS COUPON TODAY

Consolidated Music Co.,  
Salt Lake City, Utah.

Gentlemen..... Please send me particulars and descriptive list of your used pianos or players.

Name .....

Address .....

I prefer.....

# Consolidated Music Co.

ESTABLISHED 1862 13-19 E. FIRST SOUTH ST. ROYAL W. DAYNES  
MANAGER  
"FIFTY-THREE YEARS IN BUSINESS—STILL IN THE LEAD"



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AUG 25 1915

# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region

OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE

VOLUME XII; No. 3

LEHI AND SALT LAKE CITY, UTAH

AUGUST 21, 1915



WHY NOT RAISE MORE PURE BRED MARES ON YOUR FARM.



# Agriculture Lesson VIII

Prof. J. C. Hogenson.

## SOILS.

**The Definition of Soil:**—It is the unconsolidated but slightly cohering mass of rock fragments and secondary chemical products derived therefrom, mixed with varying amounts of organic remains; containing some water and air, and usually minute forms of plant life; has a considerable degree of heat, and forms the surface of the earth and in which plants will ordinarily grow.

Hilgard gives this definition as follows:—"A soil is the more or less loose and friable material in which, by means of their roots, plants may find a foot hold and nourishment, as well as other conditions of growth. In its agricultural sense, the word soil is used to describe this thin layer of surface earth, that like some great blanket, is tucked around our globe. The denser and more compact material under this is called the subsoil. The soil varies in different localities from a few inches to many feet. The same is true of the subsoil."

Nitrogen is the element used in building up young tissues, and is also present in protoplasm (the living substance of plants). Plants take their "n" from the soil in the form of  $\text{NO}_3$ . Nitrogen occurs in the soil in the form of humus, barn yard manure, nitrates, ammonia nitrates, and nitric acid. The last three are only transition stages in the formation of nitrates. Small organisms in the soil act upon the Humus and manure in the soil and change it to nitrates, ammonia and nitric acid. Another form of organism act upon these and use up the Hydrogen, thus forming nitrates, which is used by plants. Leguminous plants have small organisms living in their roots which give the plants the power to take and use free nitrogen from the air. Nitrogen causes a luxuriant growth of foliage of a healthy dark green color.

Potassium is chiefly found in young tissues and is usually connected with the formation of protein. Where potassium is lacking, no starch is found and growth ceases.

Phosphorus. This is taken into the plant in the form of phosphates ( $\text{P}_{205}$ ) it assists in the transfer of soluble albumenoids from place to place in the plant.

Iron is essential in small quantities and must be present before chlorophyll can normally develop. It seems to be merely medicinal.

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**Lime.** The action of lime is also medicinal, its function being to neutralize the poisonous acids that are formed in the plant. It also assists in strengthening the cell walls.

**Magnesium** and its action are but little known. The salts of this element, however, must be present in the seed. They also act with nitrogen in the promotion of protoplasm and probably also in influencing the promotion of chlorophyll.

**Sulphur** is taken hold of by the plant in the form of sulphates which are thought to be decomposed by the oxalic acid in the plant, setting sulphuric acid free, this is then broken down and the sulphur is taken into the plant a constituent of the albuminoid compounds.

**Composition.** All plants may be said to contain the following combinations of substances in different proportions:

Water, Dry Matter; Dry Matter, composed of Ash, Organic Matter; Organic Matter, composed of Protein, Fats and Carbohydrates, Albuminoids, Amids, Nitrogen Fire Extract, Crude Fibre.

Of these substances, water and organic matter is said to be volatile, that is they disappear or change to gas by the application of heat. The amount of water in various plants is different. Most plants, however, contain from 70 to 90 per cent when they are growing. It is most abundant in young plants and becomes less as the plant matures and becomes more woody. The organic matter in plants is that part which is destroyed or changes to gas by burning the plant. It consists of combinations of nitrogen, hydrogen, oxygen and carbon, the percent of organic matter in plants is about 85 or 90.

The non volatile, or that which remains after the plant is burned is the ash. It usually consists of carbonates and phosphates of lime potash and silica.

**Protein** is the name of a class of substances containing nitrogen, they are divided into albuminoids and amids.

**Albuminoids** are the substances which go to make up the flesh of the body. They are soluble in water and are coagulated by heat.

**Amids** are substances also soluble in  $\text{H}_2\text{O}$  and are found in large quantities in immature plants and crops.

**Fats** are those portions of the plant which are soluble in ether. In plant life it is likely that fats are reserve material which the plant may draw upon in case of need.

**Carbohydrates** consist of combinations of the elements of carbon oxygen and hydrogen. They are the heat producing substances of the body. They are usually divided by chemists into N F E and crude fiber.

**N. F. E.** is the starchy part of the plant. It includes besides starch, the sugars, gums, etc. The substances are easily digested by animals and are good foods.

**Crude Fiber.** This consists of the woody part of the plant and is the least digestible of food constituents.

In the leaves  $\text{CO}_2$  is taken from the air and is broken up by the action of sunlight into C and  $\text{O}_2$ .

The water taken from the soil unites with the C thus forming  $\text{CH}_2\text{O}$

or Formaldehyde which is thought to be the first product in the forming of organic substances within the plant. From this, starch and sugars are formed and from these, by a rearrangement of the elements, woody fiber is formed.

**Source of the essential elements.**

The sources of plant food are the air and the soil. The air supplies carbon and oxygen in the form of  $\text{CO}_2$  water, which is made of hydrogen and oxygen, and soil nitrogen. These elements are all gases and are volatile so that they are invisible to the eye. The soil supplies all the mineral elements, including Potassium Phosphorus, Iron, Nig, etc. these elements are not volatile and are solid substances or else are dissolved in water. The soil is the original source of food supply for plants, the foods may be divided into three classes: (a) solid, (b) liquid, (c) gaseous.

**The Solid Phase of the soil, Derivation**  
1. The inorganic is the rock fragments of which the soil is made together with the secondary chemical compounds derived from rock.

Prof. Merrill gives the following definition of a rock.—"A rock is a mineral aggregate which is an essential portion of the earth's crust and occupies a more or less well defined position in the structure of the earth."

**Definition of Mineral:**—A mineral is a compound occurring in nature having theoretically a definite chemical composition and is crystalline in structure with definite physical properties.

1. Quartz and the minerals related to it. They consist principally of dioxide of silicon, with some water. It constitutes the bulk of most rocks. Quartz is found sometimes as crystals but mostly as quartz rock which is glass like and irregular in structure. There are also close grained varieties which include stones called Hornstone and Flint. Sandstones consist of grains of quartz connected together. Granites, gneiss and mica schist form sandy soil. The quartz grains withstand weathering and thus forms in small grains or sand.

2. Feldspar is a compound of silicates of potash, soda or lime. Potash feldspar with quartz and mica forms granite and gneiss; these are the chief sources of clays. Lime feldspar is Kaolin or pure clay. Clay, as we find it in the earth, is formed by the action of water. The feldspar readily weathers, hence the small grains of which clay is formed.

3. Hornblende forms the red soils; it contains iron.

4. Angite also forms red soil and contains considerable iron.

5. Mica, when black, contains iron and is called

6. Serpentine, is a Hydrous silicate of magnesia. It forms the blackish green rock masses found in nature. It is very poor in plant food. The Hornblende, Mica, Angite and Serpentine are composed of  $\text{FeMg}$  (Al, Na)  $\text{SiO}_3$ , the Iron, Mg and  $\text{SiO}_3$  are always constant while the Al and Na vary.

7. Calcite ( $\text{CaCO}_3$ ) and other limestones, such as marble are distinguishable from quartz by their cleavage in three directions. Limestone forms the loams or dark soils.

8. Dolomite resembles calcite but it contains 50 percent of  $\text{MgCO}_3$ . In the U. S. dolomite underlies the barren or unfertile spots of several states.

9. Gypsum, is sulphate of lime, 14 percent of water, the soils derived from it are not very extensive. It is

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used as a fertilizer in the eastern states, and is called Land plaster.

10. Iron ores. Limanite is the brown ore and is found deposited on the upper surfaces of clay layers under sand. It is the coloring matter of all yellow or red soils and clays as well as the brown sand stones.

11. Hemetite or red iron ore is derived from limanite by it loosing its water. There is not much soil derived from it.

## OUTINGS AND AMUSEMENTS

Communities as well as individuals should plan to have a summer outing and other amusements. This is as necessary a part of our duty as to plan the farm and household work. It has been found that some kind of sport, play and amusement is necessary in life in order to be most efficient. Besides this they add to the pleasures of living. One day in the season is not enough. A number of things, planned and provided for, events in which every member of the family may join, is well worth while. It has been found that the puritanical idea concerning amusements is wrong and defeats the end sought. Besides outings and vacations away from home, there is need of home games and pastimes for every member of the family. Outdoor games such as croquet, tennis, quoits (pitching horseshoes), will be found interesting and beneficial to all.

Don't say you get enough exercise out in the fields or at the housework. That does not meet the need. Learn to unbend in mind and body and get back some of the God-given spontaneity of youth in real play. There is an inclination to specialize and commercialize sport. A comparatively few athletic people take it up as a business and the rest pay to see them play, and sit humped up and hollow-chested getting no benefits except the sun and the air. Let everybody play.



## Agriculture College Agronomy Department to Have New Quarters

Last year 344 students were enrolled in the Agronomy department. Forty-four took Soil Management; forty-five, Dry-Farming; twenty one Seminar; nine, Soil Survey work; forty, Farm Management; forty-nine, Irrigation Practice; thirty-eight, Forage Crops; eight, Manures; forty Cereal Crops; eight, Summer School work; twenty, the Winter Course; fifteen, Crop Judging, and seven did Research work. As the big majority of these students did their work at the same time, the space allotted the department was crowded beyond its limit.

When room 25, 29, and 33 of the basement were equipped for the Agronomy Laboratory, they furnished ample room for the requirements of the work. But each year has seen a growth in the enrollment until the rooms were too small to accommodate all registering for the courses.

The building of the new laboratory building furnished the opportunity for the change now proposed. The suite of rooms now occupied by the Zoology and Entomology Departments are located on the first floor of the main building in the north east corner. They receive the direct sunlight, have plenty of windows, are well ventilated and are cheerful and roomy. The Zoology and Entomology Department will be moved from these rooms to quarters in the new laboratory building and the Agronomy department will occupy them. The laboratory rooms will be equipped with remodelled desks that will supply all the latest conveniences that those in the old laboratory lacked and some new apparatus that will facilitate the analytical and research work. The proposed arrangement will afford each student to do concentrated individual work and carry on various operations in selective subjects. Accompanying the laboratories will be a library room which will have shelved in it the thousand or more volumes of the famous Agronomy library. There will be room for a number of reading tables and chairs, and the students may go there for quiet thoughtful study.

Franklin S. Harris, Professor of Agronomy, has charge of the present changes. He is a graduate of the Brigham Young University of Provo. After his graduation he became Assistant Chemist of the Utah Experiment Station and in 1908 went to Cornell University from where he took his Doctor's degree in 1911. His services were then employed by the Agricultural College of Utah. He was made Professor of Agronomy and Director of the School of Agricultural Engineering. Professor Harris has done much in building up the Agronomy Department to its present standing of efficiency and numbers, and is taking an active part in making the new Agronomy quarters adequate to all the needs of the department both in the matter of room and scientific apparatus.

The State Experiment Station's dry farms are under the supervision of the Agronomy Department. All the records of these stations are on file at the A. C. Agronomy headquarters. From here the work is outlined and directed and much of the business transacted. It is the business of the agronomy professors to visit these

farms and inspect in person the work done there, keep in touch with the experiments carried on, and draw conclusions from the results obtained. Thus they are enabled to get first hand, facts and data which apply directly to the varying conditions of Utah. This information is written and published in circular form and distributed free of charge to the people of the State.

In making the present changes much attention has been paid to the office needs, storage and exhibition requirements of this experimental work. When it is known that five large farms, situated in various parts of the State are supervised by the Agronomy Department it becomes evident that this is an important work and that attention must be given to it from every angle.

The work of the Nephi Station in Juab County is done under the co-operation of the Agronomy Department of the Agricultural College and the United States Department of Agriculture. Dr. Harris reports that a series of experiments are being carried on this year in Wheat Cropping Systems; Breeding of Wheat, Oats and Barley; How and When best to Use Farm Manures; the Value of Green Manure; Plowing Methods; Tillage of Fallow Plots; and Rotations of Crops.

The farm at Greenville, Cache County is performing a greater variety of experiments than any of the other farms. There, experiments in dry-farming and irrigation are carried on and intense methods are used in their operation.

The farmers at Monticello, San Juan Co., Cedar Fort, Utah County, and Cedar City, Iron County, are working along lines that are of particularly vital importance to the sections in which they are located. Although the work attempted is not so extensive as that done on the Nephi Farm yet the results which are being obtained are very satisfactory.

Many students and graduates from the A. C. will look back to their days at school and experience a feeling of friendship for the old laboratories, where they spent so many hours preparing themselves for life's work, that are now being deserted. In the past five years seventy-seven capable young men have majored in Agronomy, when taking their degrees from this Institution. Every part of the State, and other states, have been represented by these graduates. Many of them have won prominence, and occupy responsible positions in the U. S. Department of Agriculture, in various high schools, in the State development work, and in private enterprises. Others have gone out and are using their advanced knowledge in developing undertakings of their own.

If the future may safely be judged from the past, many more boys will major in the Agronomy Department. They will enjoy in their work, the facilities of the new quarters even more than the students of the past enjoyed the old ones because the new are more adequate to their needs.

More of these boys, according to Dr. Warren of Cornell University, are going back to the farm each year to apply their learning. Thus the Agronomy Department has an important function to perform; for the farm is the basis of our national

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existence and no department does as much toward the preparation of the student for practical farming than does the Agronomy Department. Thus the wisdom of giving it more room and added facilities is seen.



# P-a-s-t-e-u-r-i-z-a-t-i-o-n

T. H. Bothell, Western Dairy Division

Pasteurization is the term used to refine the process of heating liquids, such as milk, beer, etc. to a temperature which destroys a large per cent of the germ life contained in the liquids. The first record we have of the use of heat as a preservative was in 1860 when Pasteur found that by heating wine to a temperature of 140 degree F. prevented it from souring. Later he applied the same process to beer with equally good results. It was not until 1886 that we have any historical record of heat being used for milk. That year Soxhlet, a noted chemist advised the heating of milk for infant feeding. While this may be the first printed record I have no doubt that the heating of milk was practiced by our mothers long before this. When a boy I have often seen my mother heat the Saturday-night and the Sunday morning's milk on the cookstove to make it keep sweet until Monday when it it could be sent to the creamery. Where she learned that heating would prevent milk from souring I do not know, unless from her mother, but I am sure that it was not from Soxhlet, Pasteur or any other scientist. The scientific reason she did not know, further than the heating made the milk keep sweet. My mother was pasteurizing milk just as surely and a whole lot better than many of our city pasteurizing plants. Pasteurization of milk, therefore, originated with our mothers. All our scientists have done is to give the scientific reason for the results obtained and aiding capital to commercialize the principles involved.

At first pasteurization was employed by dairymen as a preservative only, but it has come to be looked upon by many of the students of the milk situation as a health measure to be enforced and directed by the health officers. Pasteurization cannot make dirty milk clean but it does lessen the dangerous effects of this dirty milk on the human system. Practically all pathogenic bacteria, which are liable to be carried by milk are destroyed or are so weakened that they are harmless by this process. Milk which has been heated to 140 degrees F. for 20 minutes is, comparatively speaking, free from the living germs of tuberculosis, typhoid, diphtheria, scarlet fever and dysentery. Even though pasteurization cannot make milk clean it destroys a large number of the bacteria which have entered the milk through the medium of dirt. Their evil effects are thus checked and the milk when it reaches the consumer can be in a better condition than if it were not pasteurized. Rosneau in his book "The Milk Question" says, "There is not a single instance on record in which a milk borne epidemic is recorded from the use of pasteurized milk."

There are those who are opposed to pasteurizing, taking the stand that they prefer clean milk to dirty pasteurized milk. A noted chemist speaking at a public meeting where pure milk was being discussed said—"I will take my milk clean and fresh, no cooked dirty milk for me." To make such statements shows that one is not conversant with the milk situation. It is not a matter of choice the grade of milk we have, but it is a

question of doing the best we can with what we have. Our milk supply is not what we desire, but simply affirming what we want is not going to make it so. It will take years, not months, of earnest work by men who are broad enough to see this great milk problem from all its many sides before we can hope to have a safe supply of milk for our larger cities. Meanwhile it is our duty to render the present supply as safe as possible and our investigators of the milk question tell us that this must be done by pasteurization.

Why it will take time to bring about this desired condition and why it is desirable under present conditions to pasteurize I wish to cite a few of the factors in milk production which have the greatest influence on the quality of milk which are at present beyond our control.

We hear a great deal about pure milk, but what is pure milk? Is it a grade recognized the same by all? I think not. Pure milk is only a relative term which is often very valuably used. I am not going to try to define it, but instead will use certified milk as my standard of purity.

What are the requisites for the certification of milk? First that it be drawn from healthy cows, 2nd, that it contain no pathogenic bacteria; and 3rd, that the total count of bacteria, other than pathogenic shall not exceed 10,000 per c. c. All the rules governing the production of certified milk are for the insurance that the milk have these requisites. Taking certified milk as our standard of purity, does it always meet these requirements. Usually, but not always. In May 1912 a dairy supplying one of our western cities, while not certified, was a dairy worthy of certification had an epidemic of scarlet fever traced to its door. This epidemic claimed as its victims the daughter of the dairyman, and nine other children of this city. The contamination came from a milk-er who had the disease so light that he worked two weeks before it was discovered. Does this mean that certified milk is unsafe? No, it only proves that they are not infallible. If such creep in where every care is exercised by men of training who know how to fight against such disasters what right have we to talk about the average milk supply being pure when it is handled by persons who have no conception of sanitation?

But why need we employ such persons to produce our milk. This brings up the question of labor. What class of men must the average dairymen employ today to do the milking and the handling of his milk? Are they the kind of men who are teachable? Hardly. He cannot hire men who would give the milk the desired attention for such men can obtain more desirable employment. The personality of the men on a dairy largely determines the quality of the milk there produced, and until men can be secured who will give the desired care we cannot expect much improvement in our dairies.

Milk production has an economical as well as a sanitary side, and while we have been prone to recognize this economical side it, never-the-less, is a very important one. The production of pure milk requires labor, equip-

ment and intelligence, each of which has an economical value, and the more of these which are used in the production of a quart of milk the higher priced the quart of milk must sell. Whether the public can afford to pay 15 cents per quart, the price of certified milk, I do not care to discuss, but one thing is sure, they will not do so. The public demands an 8 and 10-cent grade of milk and this demand must be met. We cannot expect the expenditure of money, or its equivalent, if the investors do not receive a just recompense in return.

Taking the first requirement mentioned for certification of milk, that is—"Milk drawn from healthy cows." What city of 100,000 can boast of a milk supply from health cows? Not many. Tuberculosis is in practically every community. It is a disease which has so far, been very difficult to eradicate. It is easy to reason that the dairymen will be better off if they would eliminate their tubercular cows. I agree that if the dairymen would eradicate this disease from their herds in ten years they would be better off. But the dairyman is living today, not tomorrow and it is hard to get him to take a friendly attitude regarding this disease. It takes one who has been reared on a farm to realize the dairyman's standpoint. When testing for tuberculosis was being agitated some years ago in Iowa I have a very vivid recollection of seeing my mother worrying for fear that the test would be forced on our herd and that it might prove to be as badly diseased as some of the herds reported in the papers. This would have meant the loss of many cows, which were the means we expected to pay off the mortgage on the farm, and the loss of which might have meant the loss of our home. Can you not get from this a glimpse of the dairyman's side of this tubercular question? They do not fully realize its meaning or importance. Because they keep tubercular cows is not criminal with the majority, it is simply self preservation. There must be more education along this line and laws that will protect and not destroy the farmers homes before we can expect them to submit kindly to the eradication of tuberculosis.

If the dairyman cannot obtain the help necessary for the production of pure milk at the present price; if the public will not pay the price required for the production of certified milk; if the present status of the tubercular situation is such that it is practically impossible to force the tuberculin test, what is to be done? We must do all we can to improve the conditions on the dairies, but meanwhile let us render the milk we have just as safe as it is practical to do so, and in order to do this we must resort to pasteurization.

Some are opposed to pasteurization, claiming that the heating destroys the lactic acid bacteria, but not the peptonizing, and as a result the milk decays before it sours. It is also claimed that chemical changes take place which render the milk less digestible, but what does our investigators say regarding these claims. Ayers and Johnson in B. A. I. Bulletin 161 state that in raw milk they found four principal groups of bacteria, that is, acid, inert, alkali and peptonizing. The work recorded in this bulletin and also B. A. I. bulletin 126 show that when milk is pasteurized at 140 degrees to 145 degrees F. and held at this temperature for 20 to 30 minutes



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the percentage of these groups in the bacterial flora remains practically the same. The small differences which do exist are in favor of the acid forming group. In B. A. I. bulletin 166 is published the work of Dr. Rupp on the chemical change produced in cows milk by pasteurization. Dr. Rupp found that when milk was pasteurized at 145 degrees F. for 30 minutes no appreciable chemical changes take place. The soluble phosphates of lime and magnesia do not become insoluble. The albumen does not coagulate until the temperature of 150 degrees F. is reached. He found that it takes slightly less time to coagulate the casin with rennet in pasteurized milk up to 149 degrees F. than in raw milk and that the acidity is slightly reduced.

These findings were not for milk heated at higher temperatures, but as this is the temperature which gives the best results, both from the health and commercial stand points, what use is it to consider others? The dairyman cannot afford to pasteurize at a much higher temperature for if he does he will destroy the cream line, which has a decided commercial value. From the health standpoint a large percent of all bacteria, and practically all the pathogenic bacteria are destroyed.

We have what might be called three kinds of pasteurization—flash, retarding and holding. Their efficiency is in the order named. Flash pasteurization is where a continuous flow of milk passes over a heated surface, which heats it to the desired temperature, after which it is promptly cooled. The time required for the whole process does not exceed 1½ minutes. In the retarding process the milk is heated similar to that in the flash, but is held at this temperature for a given length of time by passing through a tank which has several compartments, the milk flowing from one compartment to another. With the holding process the milk is heated in a similar manner as in the flash and retarding processes, but is held, while hot, in a vat a definite length of time. The objection to the flash process is that too high temperatures are required to be effective. In the retarding process the flow of milk, theoretically at least, is more rapid in the center than at the sides of the retarding vat, thus part of the milk is not held the required length of time. The holding process is the one which has come to be recognized as pasteurization, and the others are substitutes only.

Pasteurization to be of its full value as a safe guard to health must receive more attention from our health officials. There are too many plants putting out pasteurized milk which is pasteurized in name only, that is, the contamination after it leaves the pasteurizer, due to dirty pipes, pumps, coolers, bottlers, bottles etc., is so great that little, if any, protection is given the consumer.

During the past 12 months I have inspected 41 milk plants. Of this number 12 were heavily cut on the score for the cleanliness of pipes, bottles etc. Often we find pasteurized milk running higher in bacteria than raw milk, which is being sold in competition to it. In a recent contest held in one of our western cities, at which I assisted as one of the judges there were 183 samples of milk entered. These samples were gathered from the dairymen's wagons as they were making their deliveries, the dairymen not knowing that the samples were

going to be taken until the inspectors stopped their wagons. These samples therefore represent the dairymen's output for that day. Of the 183 samples of milk entered 85 were pasteurized. Of these 85 samples 55 of them, or 64 per cent, had a bacteria count of over 100,000 per c. c. and of these 55 samples 15 were over 500,000. On the other hand of the 98 samples of raw milk only 19 of them, or 20 per cent, were above 100,000 and of these only two were above 500,000.

Before this condition can be materially changed the term "pasteurized" has got to be safe-guarded in a similar way that the term "certified" is protected today. Instead of placing a stigma on pasteurized milk by compelling it to be marked "pasteurized," thereby making the public suspicious of it, reverse the order, and make it a privilege to use the term. Have certain requirements which must be conformed with before the dairymen can have the privilege of using the term "pasteurized" and let the public know that milk marked "pasteurized" has been pasteurized under the direction of the department.

Whether pasteurization is only a temporary need I am unable to say, but I am sure that scientific pasteurization is the next step in the pure milk campaign. I do not advocate it as a cure of the milk trouble, as it is not. I do not advocate it as a purifier of milk, for it is not, but I do advocate it as a protection to the public health until the time comes when pure milk is a common commodity on our markets. If at that time the public decides that pasteurization is no longer necessary it will automatically be discontinued.

#### SOME CAUSES OF LOSSES AND WASTES IN MARKETING.

With the perishable nature of a large part of the fruits and vegetables marketed there must be some loss. This often totals higher than the farmer realizes. For instance, according to the Department's market specialists, the loss on such commodities as strawberries, peaches, and grapes sometimes amounts to 30 or 40 per cent before they reach the hands of the retail trade. Losses due to spoiling may be the result of the shipper's sending overripe or diseased fruit, or failing to give proper attention to packing, to loading, or to bracing the package in the car. Sometimes the railroad is at fault. Delay in transit, improper ventilation or refrigeration, or unnecessarily rough handling of cars may contribute to rapid deterioration of the shipment on arrival.

The lack of proper refrigeration facilities at distributing centers is a cause of much loss. When produce moves slowly, there is often much spoilage before complete sales can be made. Rough handling during unloading or carting is another important cause of loss. As a matter of fact, the opportunities for losses due to the spoiling of commodities are so manifold that it is impossible to enter into a complete discussion of them.

It is always well to bear in mind the really serious side of losses and wastes. The spoiling of a dozen cantaloupes, a basket of grapes, or a crate of strawberries represents an absolute loss to the community. No benefit accrues to producer, distributor, or consumer from such a condition. The loss accruing at this point must be borne by both producer and

consumer, and in a great many cases the distributor must bear his part of the burden. The Department's specialists think in many cases losses and wastes are entirely too heavy a tax on food distribution and that the elimination of unnecessary wastes would do as much toward effecting permanent, substantial economies in marketing and distributing as any readjustment of present marketing methods could do. The fact that a large percentage of these losses can be avoided by proper grading, packing, and shipping, together with prompt, efficient handling while the goods are in process of distribution, makes it imperative that this subject be given special consideration by those interested in the efficient marketing of farm crops.

A better understanding by the farmer of the complex marketing machinery would enable him to intelligently choose between the many channels through which his fruits and vegetables might be marketed. A new bulletin just published aims to

make clear to the layman the rather intricate machinery of the market and deals with methods of receiving, inspection, rejections, terminal distribution and sales methods, the broker, auction sales, carlot wholesalers, commission merchants, jobbing sales, public markets, etc. This bulletin may be had free by those interested upon application to the United States Department of Agriculture, Washington, D. C. Ask for Farmers bulletin No. 267.

#### CHOCOLATE CREAM NECTAR

2 squares of chocolate.

½ c. hot coffee.

1 tsp. vanilla.

1½ c. sugar.

3 c. water.

Whipped cream.

Melt the chocolate in the coffee, add the sugar and water and boil 5 minutes. There should be 1 qt. of the liquid. Chill, add the vanilla, pour into glasses in which you have placed 1 tbsp. of whipped cream.

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It only cost one dollar a year and comes every week. We answer your questions and help solve your problems.

Be a booster help us and you help yourself for the more subscribers we get the better paper we can make.





With which is combined "The Deseret Farmer" and Rocky Mountain Farming. Established 1904

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Subscription Price \$1.00 per year

OFFICES:  
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James M. Kirkham, Manager  
Kirkham Building, Lehi, Utah

#### ADVERTISEMENTS.

We believe that every advertisement in this paper is backed by a responsible person. We guarantee the reliability of advertisers, but we will not undertake to adjust trifling differences between subscribers and advertisers. This guarantee holds only when written complaint is made to the publisher within one week from the date of any unsatisfactory transaction, accompanied by proofs of swindle and loss and within one month of the date of the appearance of the alleged deceptive advertisement in the Utah Farmer, and the subscriber must prove that in writing to the advertiser he said: "I saw your advertisement in the Utah Farmer."

#### OFFICIAL ORGAN

Utah Horticultural Society, Utah State Dairymen's Association, Utah State Bee Keepers' Association, Bear River Valley Farmers' Protective and Commercial Association, Agricultural College Extension Department and Utah State Fair Association, Utah-Idaho Millers' and Grain Dealers' Association.

When you ask for a change of address always give OLD and new postoffice address.

Time now to begin and prepare some exhibits for the fairs.

Turn your weeds into profit by letting some sheep eat them.

Protect your animals from disease by keeping the place clean.

The test of a good neighbor is one who will refuse to lend you the tools you ought to buy for yourself.

We ought to have more silos in Utah. They are a profitable investment. Are you planning to build one this year?

All through the east they have had so much rain that there is a question as to whether some of the crops will be able to mature or not.

What we need is good roads and modern homes. Help the farmers secure these and you will do more toward building up the rural communities than any other two things.

What have you done towards selecting your seed grain for next year. It will pay to do a little hand selecting of grain for seed while it is yet in the field. Are you trying to use better seeds each year?

There is no golden pathway to success. Better methods, carefully developed plans, a cheerful spirit, a de-

termined effort to overcome every thing that may come in your way, to believe in your work, to love your job and all the surroundings, these are a few of the things that make for success.

When you see an advertisement in the Utah Farmer you know that it is a guarantee of reliability, honesty, and that you will get a square deal. We are very careful as to who advertises in our paper. You should not hesitate to deal with them or ask for the goods advertised.

If you visit a farm and see a gate hanging on a broken hinge, boards knocked off the barn, the fence broken down, what is your impressions of that farmer. Look at your surroundings and see how many little things there are about the farm home that should be attended too. We some times put off little jobs thinking we will spend a day attending to all of them, but that day does not seem to come around.

There is something lacking in our system of marketing farm products. When a farmer toils all summer to produce a crop, and then others come in between the producer and the consumer and make nearly as much profit in a very short time as the farmer does for his year's work of producing it, there is something wrong. It is a problem how we are going to overcome this condition but we will have to put up with it until a united effort is made to bring about a better system.

Plant some trees on your farm. Along the street fence and also the partition fences. Do a little thinking as to the best kind of trees you should plant. In many places English walnuts could be planted, they are beautiful and in a few years would bring you a profit. Plant some trees around the corrals for shading the animals and beautifying the place. If you plant trees this year it will only be a short time until you can look back and with pride see them growing and helping to make your farm more valuable.

#### FARMERS' INSTITUTES POPULAR.

Nearly four million farmers attend farmers' institutes in the United States during the fiscal year ending June 30, 1914. The government reports shows that 25,238 institutes were held. This is an increase of attendance of 26 per cent over any previous year. The cost of conducting these meetings were less than the year previous. The government has just issued a bulletin going into detail about these various farmers' institutes, demonstration meetings and special railroad trains. Nearly every state has a different method in hold-

ing these meetings and reaching the farmers. The work in Utah has become very popular and we believe that much good is coming from the efforts of these who are holding these institutes.

#### CHEAPER MONEY

Much is being written these days about the farmers and cheaper money. About all it has amounted too is talk so far. Usually the "talk" has to go before we get action. The farmer has growing needs, more farm machinery, better and increased numbers of live stock and other things that would help make money on the farm. To secure these he must have money. Not a six month or year loan but one long enough in years that he can have time to earn it before it comes due. He can not afford to pay the high rate of interest that has been charged on farm loans. Who is going to solve this great problem, better credit facilities which will include cheaper money?

#### NAMING YOUR FARM

When you select a suitable name for your farm, there is not only a personal benefit, but your neighbors will no doubt follow your example. It gives your farm an air of distinction and will help advertise the community. There are so many names, so many things that will suggest an idea for a name, that one does not need to lack for names. The name should be appropriate and have a meaning, a reason why it is so named.

The natural surroundings or the names of the family may suggest a name. The situation or location may give you an idea. If you live near water consider this feature in selecting a name. Names chosen from prominent trees on the farm are pleasing and popular. Once chosen see that the name is given a prominent place and neatly painted on a sign at entrance to farm.

#### HOG CHOLERA AND

#### OTHER SERUMS.

In order to protect the farmer from the sale of worthless or contaminated viruses, serums, toxins, etc the United States Department of Agriculture have drawn up some new rules. They have invited the manufacturers, stock raisers, veterinarians, and state officials to meet and express their views upon these new proposed regulations.

It will be necessary for any manufacturer who may ship any of these products interstate to have a Federal license. The government wants to protect us, believing that the purchaser or user is not able to determine for himself whether or not they are pure and up to standard. They hope to overcome to a certain extent at least, fraud or carelessness. For this reason the new proposed regulations

have been amplified and strengthened in several respects. Fortunately, in Utah we have little occasion to use these serums etc, but when we do it is of great importance to use only the best.

#### WHERE DOES YOUR MONEY GO.

There are few farmers but what make some money. Who gets this money you earn? If you are keeping cows do you spend the greater parts of your receipts for hay and other feeds or do you produce the feed on your own farm and market these crops by the milk and cream route.

Have you been running an account during the year at the store and at harvest time must pay the storekeeper a big part of the returns you get from your crops? Possibly a greater part of the things you purchased could have been produced on your own farm.

Money saved is money earned. You may make big money but if you spend all of it in making it what is the advantage? We can not produce every thing on the farm that we need. We can, however, produce a great deal more than what we are doing now.

Plan to save some of the money that you are now spending. We have only suggested two ways to do it, there are many more. Keep an account of where your money goes, then carefully study and plan some methods how you can save more.

#### INVEST YOUR PROFIT AT HOME

If the farmers of this state, after paying off their debts would invest their money at home, what a change it would make in our farms. Instead of this, the farmers have made investments away from home, under the delusion that profits grew quicker away from home.

Some farmers have invested their profits in coal companies, that have failed, in oil fields, which yield no profits, in gold and silver mines, which exist only in the imagination and in the literature of the promoters, in rubber companies, that have proved worthless, and other "wild cat" schemes.

This is human nature. We all like to get rich, and many of us think, or we are led to believe, there is a short cut to wealth. Experience has taught us much. We learn by the mistakes we make.

Had we invested our money at home, put it on our farms in the way of improvements, live stock, better fences, our power for making money would have increased. Instead of selling our grain and alfalfa we would be feeding it at home to well-bred cattle, properly housed and cared for.

If we have made mistakes let us profit by them. Few people will be as careful with your money as you will yourself.



# POULTRY.

## LEG WEAKNESS IN CHICKS

Helen Dow Whitaker.

When a poultryman goes out in the morning to find his biggest-framed most rapid growing chick wobbling around on unsteady legs, and by night walking upon his hock joints, or refusing to walk at all, he wishes to know what causes leg-weakness and why it effects his most rapidly growing chick, if any. Leg-weakness is found more often among brooder reared than among hen reared chicks. One condition favoring it is a bottom-heated hover. The floor of the hover should be slightly warm, about 60 degrees, but should never feel hot to the hand. The chick that sleeps stretch out upon a hot floor is weakened hereby. Nature seems to insist that a chick should have heat radiated from above down over his back, and teaches him to stick his head out from under his mother or the edge of the hover to keep it cool and get fresh air.

Other conditions favoring leg-weakness are over-crowding, poor ventilation, dampness and whatever tends to lessen the vitality of the chick. Keeping chicks upon hard wooden or cement floors too much of the day is frequently cited as a cause of leg-weakness. It rarely effects chicks, that from the start, are able to be out on reasonably dry, loose earth in which they scratch incessantly, and where they find abundant tender succulent green food. Undoubtedly, if there be added to a lack of exercise and a lack of good green food, the over-feeding of a somewhat rich ration, leg-weakness is likely to result.

Chicks need, in abundance, nutrients for the building of bone and muscles. Their ability to get these is dependent upon:

1. The right food supplied them.
2. Appetite to induce them to eat largely.
3. Ability, not only to digest what they eat, but to assimilate the nourishment in it.

Lessen a chick's vitality by overheating, crowding, impure air and dampness, keep him upon a hard board floor that offers little inducement to exercise, over-feed him of rich food until his appetite is cloyed and his system clogged so that he cannot digest his food and it is not strange that his rapidly growing frame and muscles fail to get the supply of building material called for and break down in what we call leg-weakness.

The remedy is fresh air, sunshine, room for vigorous scratching in loose soil, a supply of food measured by the appetite, with plentiful green stuff and fresh water to aid in its digestion. Protein and ash are needed rather than fats. These are supplied by rolled oats for the first four weeks and later sprouted oats, by wheat bran, finely cut green clover or alfalfa, milk, and granulated bone.

I wish especially to emphasize the value of a high grade of dry granulated bone. Its analysis shows over 20 per cent of protein for muscles and feathers, over 40 per cent of lime for bones and feathers, and over 20 per cent of phosphoric acid. The phosphates are more and more being recognized as valuable in animal

nutrition and hence growth. Use at least one pound of granulated bone to every ten pounds of bran fed to growing chicks.

## A BALANCED FEED RATION FOR EGG PRODUCTION.

One of the factors which determine egg production, is the feed ration, not merely the quantity of feed given, but the elements contained therein.

Many questions are asked as to what a balanced ration for egg production is, and how to balance the ration. In order to determine more fully the effect of certain rations, a number of experiments are in progress at this Station. Each pen contains five hens.

The test with a wide ration, containing elements which would produce three yolks for each white, laid 379 eggs in the first six months.

The test with a narrow ration, containing elements which would produce 2 whites to each yolk, produced 269 eggs.

The test with a ration containing equal yolk and white material but without minerals to produce the shell, produced 161 eggs.

The test where the ration contained elements necessary to produce equally all parts of the egg, produced 160 eggs in the same time. This ration is called a BALANCED ration for egg production.

The yolk is principally carbohydrates; the white, protein; and the shell, minerals. Thus the three parts of the egg are made from three kinds of food.

The following ration is fairly well balanced for egg production. Instead of using the terms "carbohydrates" and "protein," the terms "yolks" and "whites" have been used. All fractions are omitted, therefore the table is only approximately correct.

Grain		Yolks	Whites
Cracked Corn	150 lbs.	382	198
Wheat	150 lbs.	365	273
Mash			
Wheat Bran	20 lbs.	21	41
Middlings	20 lbs.	41	44
Corn Meal	20 lbs.	52	27
Ground Oats	20 lbs.	39	31
Gluten Meal	20 lbs.	46	86
Beef Scraps	30 lbs.	32	332
Alfalfa Meal	5 lbs.	7	9
O. P. Oil Meal	5 lbs.	8	25
	440 lbs.	1003	1066

The hens had access to oyster shell and grit, and were given two pounds of fine table salt and four pounds of fine charcoal in the above mash.

The basis for computing the number of yolks and whites produced by each kind of feed was that one pound of carbohydrates would produce 3 1-3 yolks; one pound of protein would produce 16 2-3 whites, this being the rate of the average hen here at the Station.

It will be seen that from 150 lbs. of corn, 382 yolks and 198 whites are produced, therefore, it is not a balanced ration. The extra yolks are built into fat. In this way, hens fed on corn alone get extra fat, and we hear the old expression that the "hen is too fat to lay." The expression should be changed to read, "The hen

can't lay is the reason she gets too fat."

A simple ration may be made as follows.

150 lbs. cracked corn	382	198
150 lbs. wheat	365	273
25 lbs. beef scraps	25	275

772 746

This ration would give best results where the hens have free range, because it contains no mash, thus requiring the hen to do the grinding of the food. The kind of food she gets on the range should be considered, however.

If a hen has the ability to produce 24 eggs in one month when fed a balanced ration, but is fed an unbalanced ration like corn alone, which produced two yolks for each white, instead of making 488 yolks in order to produce 24 eggs, she makes only the 24 yolks, but can complete only twelve eggs. The same thing is true of the whites. It is the same proposition of "no chain being stronger than its weakest link." No hen will lay more eggs than the weakest part of the feed ration.

## SOME GOOD THINGS

### TO REMEMBER

By, Barnyard Kackling

The stronger the man, the stronger his will and brain, and the greater his ability to match wits and win. If he has confidence in himself, other people will have greater confidence in him.

It has been proven that the average man is only fifty per cent efficient. What are you and I doing to beat that figure? Much mentally, no doubt; but many of us not much physically. The fact of the matter is many of us are not even fifty per cent efficient more than half of the time. There must be a reason, figure it out.

One most excellent reason is that the human system does not (or we might say, will not) rid itself of all the waste (and lost motion) which it accumulates under the present mode of living. Don't drug yourself with patented concoctions. Work, think, eat, exercise abundantly in the fresh air. Of course, we need a tonic occasionally, but do not imagine that is "booze."

If any piece of machinery, or even a clock is not cleaned once in a while, wheels clog up and they soon stop or become less efficient. If either needed cleaning you would surely use some harmless cleanser, not a harmful one. This same rule applies to the machinery of the human family.

Repair our damaged system, eliminate all waste and our functions will respond properly and in accord. With everything working in perfect harmony and without the least obstruction, then our brains will be healthy and clear, and our entire physical makeup will be competent and will respond more quickly—in this condition only can we even hope to attain to the 100 per cent rank. Did this ever occur to you?

## MUCH THE SAME

"Daughter," said the father, "your young man, Rawlings, stays until a very late hour. Has not your mother said something to you about this habit of his?" "Yes, father," replied the daughter sweetly, "Mother says men haven't altered a bit."

Unless a man amounts to a good deal, he should not say he has done his best.

## DAISY FLY KILLER



placed anywhere, attracts and kills all flies. Nest, clean, ornamental, convenient, cheap. Lasts all season. Made of metal, can't spill or tip over; will not soil or injure anything. Guaranteed effective. Sold by dealers, or sent by express prepaid for \$1.

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## ARE YOU COMING?



THE FARMERS' OWN SHOW  
100,000 farmers will attend and exchange ideas. U. S. Government, 17 Western States and Canada will exhibit farm products raised with and without irrigation. See the largest Tractor Plowing Demonstration ever held. Implements exhibited will include everything the farmer needs to make his work easier and more profitable. Speakers will cover all subjects vital to the farmer and his family. We want you to come. Ask questions. Make suggestions. Address INTERNATIONAL DRY-FARMING CONGRESS, DENVER, COLO.

## Your Farm Equipment

should include "Never-Rip" work clothes.

—They'll give lasting service and pay for themselves many times over, in lightened labor, clothing saved and in service given.

—For that big farm or for the little backyard garden this spring, there's no assistant more able and useful than

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## NEVER-RIP

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THE BEST \$45.00 strictly all oak tanned western Double Team Harness on earth with breeching and collars for



\$36

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Hame tugs, 1 1/2 inch, with three loops and patent buckle. Traces 2 1/2 inches solid single ply, with cockeyes.

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When writing to advertisements, say you saw their ad in the Utah Farmer.



# Competition and Quality In Creamery Work

By G. E. Frevert, U. S. Dairy Division.

In discussing this subject let us first of all take an inventory, as it were, of the conditions which in our present creamery system are tending to lower quality and those which are, on the other hand, tending to raise quality. The factors I would mention, which in my estimation, are lowering the grade of our butter on the market are as follows:

1. Paying same price for all grades of cream.
  2. Long distance shipments of cream.
  3. Lack of modern methods in creamery.
  4. Trust control of markets.
- Among the factors which I would mention as tending to prove quality of butter are the following:
1. Giving the producer the benefit from improved quality of cream (Grading cream)
  2. Manufacture at local creameries.
  3. Improved methods of manufacturing.
  4. Butter scoring contests.
  5. State inspection which educates.
  6. Importation of foreign butter.

If we are to believe the fact, frequently expressed in our dairy papers, the quality of butter, as found on our markets, has gradually become lower during the past ten years. It has been found that on the New York markets ten years ago about 25 per cent of the butter graded as "extras," while at the present time only about three per cent of the butter comes up to that standard. It is a recognized fact among men who have given this subject careful study that competition in the buying of cream has been very largely the cause for the lowering of the quality of our butter.

In too many instances I believe that the producer has been blamed for this decline in quality. I do not wish to uphold the producer who does not produce a good quality of cream, however, the average producer is after the money he can get out of his cream and as long as he can sell his butterfat at the same price, regardless of the condition of his cream, we can not blame him for not taking an interest in the production of a high grade cream. When a small local creamery tries to discourage the production of low grade cream by paying a lower price for it the producer invariably turns to the large central plant, which pays the same price, regardless of quality. Instances of this kind have frequently come to my attention. For this reason I do not favor competition in the buying of cream. The question immediately arises how are we going to eliminate competition? The only way which I can see that would be at all feasible is that the cream be sold or manufactured by a co-operative association of the producers and that it be paid for according to grade. Where there is a sufficient amount of cream I believe the butter should be manufactured locally. By this system the producer receives the amount for his butterfat it brings in the form of butter. The producer would then be interested in producing better cream because the better the cream the better the butter that can be produced, and the better the price that could be secured for the butter.

There is no question in my mind but that cream shipped long distances—as much of our cream is—is not in as good condition for butter making as that delivered at the local creamery. This is especially true in warm weather, when the fermentations in the cream go on very rapidly. I think that no one who has observed the condition of cream as it appears on our depot platforms, or as it is delivered to our central plants and which has, in most instances at least, reached an advanced stage of fermentation, believes it is in a fit condition for the manufacture of highgrade butter. We must therefore lay some of the blame for the condition of the cream to the creamery system which requires that the cream be shipped long distances. In condemning this system we should, however, bear in mind that there are many localities where only small quantities of cream are being produced and where there would be insufficient cream to make a local creamery pay.

On the other hand lack of modern methods in the local creamery frequently are as largely to blame for low quality as is the long distance shipment of cream. The buttermaker in the local creamery who fails to pasteurize and use a starter, or who allows the cream to stand after it reaches the creamery is as much to blame for the downward trend of quality in butter as is the centralizer who ships his cream long distances. I have found in my investigations that less than 50 per cent of the creameries in the Northwest, so far as I have been able to find out, are pasteurizing and using a starter. These lax methods of manufacture frequently are the cause of failure in the creamery business, as a result of the low quality of butter produced.

The cost of pasteurization by the holding method in the cream ripener is very small and the effect upon the quality and especially the keeping quality of the butter is very marked. In experiments conducted at the Idaho Experiment Station, during my work there, we found that the deterioration in score and the chemical changes in the butterfat were much greater during storage of butter at various temperatures, when the cream had not been pasteurized. The results obtained with high acid cream in these experiments were not so favorable to pasteurization as was the case where the cream had a comparatively low acidity. In all cases, however, the pasteurized cream butter proved to be the best keeper.

In some of our cities there appears to be what we might term a trust control of the butter market. This is probably due to the fact that the large central creameries are usually located in the city. They also control very largely the produce business of the city, and through this combination are able in some instances to force their low grade butter on the market to the exclusion of the small creamery which may be producing a high grade butter, but which is located out of the city. The co-operative marketing of a high grade butter from local creameries will tend to

eliminate trust methods and create a demand for better butter on the market. This explains also in part the reason why the large central creamery prefers to buy cream from local creameries, rather than a high grade butter, for if the high grade butter which can be made in the local creamery is excluded from the city market the lower grade butter from the central plant will sell more readily on the market.

Butter scoring contests may or may not be conducive to raising the quality of butter on the market. If the object is to educate the butter-maker by pointing out the defects in his butter the contest may result in much good. On the other hand if the creameries competing make special selection of cream, and make every effort to win, and then after winning, use that to deceive the public into believing that all butter produced by them is of high quality the contest has a tendency to lower the quality of butter on the market. Too often the winning creamery uses its winning of first prize to dump, as it were, large quantities of low grade butter upon the public by advertising.

The right kind of state inspection tends to raise the quality of butter on the market. Inspection, however, in order to be of value must not only fine the offender, but the inspector must have such knowledge of the dairy business as to show the producer as well as the creamery man how he can improve his methods.

No doubt the importation of foreign butter will have its influence upon the quality of butter on our markets. It will be necessary for us to improve quality if we are to compete with New Zealand butter or with butter from the eastern states. This fact makes it very important that the producer and manufacturer join hands in raising the quality of butter produce in the west.

It is hardly necessary I take it for me to go into a discussion of the value of the dairy business as a factor in the development of a state or community, or a country for that matter. Where the dairy cow is doing her duty and she and her products are correctly managed there is a steady increase in wealth in the community, and what is perhaps most important the fertility of the soil is increased. Let us therefore co-operate with each other for the up-building of the dairy industry.

## THE TRUE OPTIMIST.

It is with distinct pleasure that we pen a tribute to the meek and lowly pig author of our breakfast bacon (says the "National Provisioner"). We have felt for some time that this philosopher—for the pig must be a philosopher to endure the slurs thoughtless man—was not receiving his due in the public press.

Poets have sung the praises of the meditative cow. The horse, noblest of steeds, has been portrayed upon a million canvasses and found a place in epic and in psalm. The hen has been recommended to take the place of the eagle upon our "far-flung banners," but until this time no one has come forward with at truly worthy encomium upon the pig.

Well, here it is—a tribute to an uncomplaining fellow that seeks no favors save the privilege of plodding with his face fastened upon the ground.

Consider for a moment the pig. The pig is nature's sedative. He is the antithesis of excitement and the antidote of worry. When frayed nerves cry out in protest, and the tired brain aches with a surfeit of care or pleasure, go then to the humble pigsty and learn a lesson of repose.

What does the farmer do when the hired man gives notice, or grasshoppers threaten to take the upper eighty? He heads for the pig lot, and, with his elbows on the top rail and one foot in an intermediate crack he watches the swine at their meal till his soul finds peace.

As a preventative of nervous prostration, a sanatorium, compared to a pig, is a riot, and the seashore an insurrection. His peaceful grunt is a lullaby to tortured ears, and his placid obliviousness of the flight of time is a rebuke to the strenuous. As he pokes his nose into the moist earth—never furiously, but with a calm and quiet—and upturns the succulent roots that he may add weight to his hams and breath to his spare ribs, to the ultimate profit of the butcher, we are reminded of the futility of crying out against the fate for which we are being fattened and taught to bow the head of humanity.

Reach over the top of the fence and scratch his bristly back with a raspy cob and his legs, unable to support his excess burden of pleasure, crumple beneath him, and he sinks to sleep, singing a song of contentment that rumbles forth from cavernous depths. He is your true optimist.

## UNIVERSITY OF UTAH

Salt Lake City, Utah.

Instruction begins Monday, September 20th.

Registration of students, and entrance examinations on Thursday, Friday, Saturday, September 16th, 17th and 18th.

Beautiful grounds, fine buildings and equipment, and specialists in all departments are AT YOUR SERVICE.

Courses are offered that prepare for almost any vocation in addition to giving a broad and liberal education—a preparation for a life as well as a living.

The credits of the University of Utah are accepted in full by the best Universities in the United States.

Full information sent upon request.

## UNIVERSITY OF UTAH

Salt Lake City, Utah.



**ASPARAGUS AND RHUBARB**

1. When is the proper time to set asparagus plants to a permanent bed?
2. When is the proper time to reset old rhubarb?
3. Give all details for culture of above plants.

**Answers.**

1. Plant asparagus as early in the spring as season will permit.
2. Plant rhubarb either in spring or fall, preferably in the early spring as soon as condition of ground will permit.

3. **Asparagus:** Asparagus will adapt itself to any soil or climatic conditions found in Utah, except locations which are extremely moist. Well-grown one-year or two-year-old roots are preferable for starting the garden plot of asparagus. Before planting soil must be well worked up so as to give a seed bed of at least 15 or 16 inches in depth. In planting dig trenches three feet apart; loosen soil at bottom and dress well with decomposed manure; over this put a layer of two or three inches of fresh earth. The roots are set 18 inches apart, with crown eight inches below general surface of the ground. The crowns, however, should at first be covered with only two or three inches of soil, thus leaving a depression.

Cultivate enough to keep free from weeds and sucker growth.

It is quite necessary to cut all the crop during the harvest season to prevent its going to seed.

Asparagus will stand drought but not an excess of moisture. Consequently, just enough moisture must be given it during the summertime to keep it growing. It should be watered well in the spring before harvesting time.

**Rhubarb:** Propagate by root cuttings or division of old plants. Plant in rows four feet apart with plants two feet apart in rows. Manure heavily before planting as soil cannot be made too rich for this crop. Plant deep, but do not cover crown with more than two or three inches of soil. Leave about two inches depression over crowns. Cultivate frequently until plants reach bearing age. When they reach bearing age delay cultivation until after harvesting in the spring. All cultivations should be very shallow.

Fertilize well after harvesting the crop, and water enough to keep ground moist in spring and just enough to keep plants healthy after harvesting crop. Never allow blossom stocks to develop. Pull, rather than cut, leaf stocks from plant when harvesting crop.

**RATION FOR MILCH COW.**

Answering a question in regard to feed for a milch cow.

Answered by Dr. W. E. Carroll.

In spite of the high price of alfalfa hay, it probably will be the most economical feed to make the basis of the ration for your cow. Give her about all the alfalfa hay she will clean up, but make her eat it clean; in addition to this, the cow should be fed some grain. Probably a mixture of wheat bran, and chopped or rolled barley will be cheapest. She should be fed in addition to the hay, about one pound of the grain mixture per day, for each five to seven pounds of milk she gives per day. If you have carrots, or beets, or any other kind of roots they will add to the ration and increase the milk flow. At prices around \$2 per ton this can be fed in quantities up to 20 pounds per day

with profit. Beet pulp is good, but usually it is not desirable to attempt to feed it around town; and when it is fed great care should be taken that everything is kept in a very clean condition. If you can get field squash at a very reasonable price you will find them about equal to roots. I am sorry we have no bulletin, but trust these few suggestions may help you out.

**SELECT YOUR SEED NOW.**

Every farmer should make field seed selection of his crops this year for the purpose of having a seed plot this coming year in order to have better seed for planting.

Now is the time to start to make land selections of your cereal crops, namely: oats, wheat, and barley. Choose very strong, healthy prolific plants in the field. This method of selection should insure you a strong healthy, good yielding plants for next year. A half of a burlap sack of grain heads this year should, if properly planted, multiply sufficiently to plant a large acreage three years hence.

Do not forget your seed selection work, farmers, as it is the best methods of insuring heavy, healthy plant production on the farm for years to come. Do not depend on your neighbors for your seed supply. Often when seed looks good it may be low in vitality and may be a very poor yielder. You cannot tell what its yielding power will be if you select from your grain bins. This season is now a good time to cease guessing. Let us make your selections in the field and be sure we are getting the proper plants.—Robert H. Stewart, Farm Demonstrator Carbon and Emery Counties.

Swan Lake, Idaho.

Utah Farmer:

Dear Sir:—Will you please answer the following questions through your paper?

What is iron worth, per ton, in the raw state?

What would be the cost of smelting ore which contained fifty percent, or more, iron with some gold and silver?

JAS. A. HALEY.

Iron ore, to be of value, must be near a market. At present iron ore in Idaho would be considered of little or no value, although it may be high in iron contents. Utah and Idaho's nearest iron market is Pueblo, Colorado, and it could not be shipped there at a profit. Pig iron from the Lake Michigan country, when delivered at Pittsburg is now selling at about 15 to 16 dollars a ton. Many of the mine owners are getting rich with a royalty of only 25c a ton.

If there is enough gold or silver in the ore to pay for the mining and smelting it is another problem entirely.

**SWINE SPREAD FOOT AND MOUTH DISEASE.**

The new outbreak of foot and mouth disease emphasizes the need of careful inspection by farmers and stock raisers. The susceptibility of swine to the foot-and-mouth disease and the failure on the part of swine owners to recognize its symptoms are giving the Federal authorities no small amount of worry in their "clean-up" campaign.

Sore mouth, a common indication of the disease, is an ordinary sequence of hog cholera, and contusions on the feet are frequent in swine which have been driven or shipped. For

these reasons little attention is paid by the owners of swine to these symptoms, and unless the herd is located within suspicious territory foot-and-mouth disease may continue in a chronic form for a considerable length of time before discovery. The danger of course lies in the ability of these animals to disseminate the disease.

Since the first of foot-and-mouth disease found in a herd of hogs in Michigan, which water permitted the infection of the Chicago Stock Yards, hogs more than any other animal have been responsible for the spread of the disease. A few months ago, in the outskirts of Philadelphia, in a district containing close to 20,000 swine kept in small lots, several thousand were found to be infected.

On July 29 foot-and-mouth disease infection was discovered to exist in a herd of 20 cattle within the city limits of Hornell, Steuben County, New York. Another herd of 25 cattle, pastured across the road from these, has been exposed and is under surveillance. As no known cases of the disease had previously been found within a radius of over 75 miles, the source of the infection remained a mystery until two days later, when 125 swine, divided among five herds, were found infected within a half mile of the first-discovered premises. These swine had evidently had the disease in a mild form for a considerable length of time. Infection had been carried from these to the cattle through drainage.

This again emphasizes the need, the authorities state, for continued careful examination of all live stock in previously infected areas, especially large herds of swine. Farmers and stock raisers by giving immediate notice of any suspicious cases to the nearest health officer will greatly aid the authorities in their efforts to eliminate this pest, which if allowed to gain a foothold would result in untold damage to the nation.

Owing to the fact that few animals are shipped from the section in which the latest outbreak occurred, it is believed that no serious or widespread complications will result from this new center of infection.

**HE LOVED HER HA! HA!**

He loved her, but was too shy to say so. She was trying to make him speak.

"Which dance do you like best—polkas or waltzes, or what?"

"Oh, I like waltzes best; one especially."

"Indeed," she said, interestedly, "which one?"

"The 'Sweet Kiss' waltz."

"Oh," said she, "you often play it on the piano, I suppose?"

"No," he said.

"I can't play the piano, but" meaningly, "I'd love to play it on the mouth organ." And he did.

Cheerful old lady—"Well, dominie, the new churchyard's fillin' up real nicely, ain't it?"—Puck.



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# Lesson In Sewing

## LESSON V.

### THE DRAWERS.

#### The Underwear Placket

Supplies:—Thimble; Needle, No. 7 Sharps; Basting Cotton; No. 60 Sewing Cotton; Pins; Emery; Tape-Measure; Scissors; Material; Pattern; Note-book.

#### The Pattern.

The pattern should be bought by the age, unless the child is unusually large or small. In that case it should be bought by the waist measure.

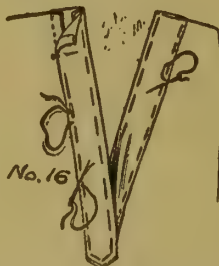
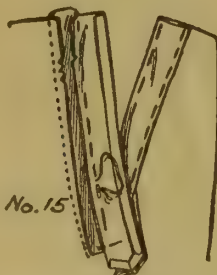
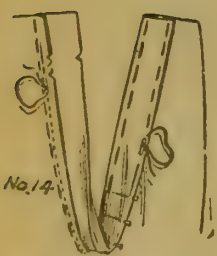
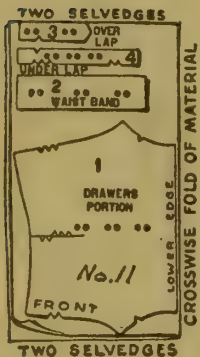
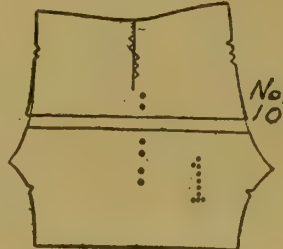
The table of quantities on the pattern envelope will tell you just how much material you will need for your size pattern. You can use muslin, long-cloth, nainsook or cambric.

If the drawers are too short for you, slash the pattern straight across. (No. 10) Separate the pieces (No. 10), making the pattern long enough for you.

#### Cutting.

Illustration No. 11 shows you the pattern for a ten-year-old girl laid out on one yard and one-eighth of material thirty-six inches wide.

You will use four pieces of the pattern (No. 11), and you must cut two pieces of the material by each piece of the pattern. Fold the material in half crosswise with both selvages even and lay out your pattern just as it laid in Illustration No. 11, with the



#### Altering the Length of the Pattern.

Measure the length of a pair of drawers that fit you nicely, making the measurement along the outside of the leg from the top of the placket to the bottom of the leg. Write down the measurement in your note-book. Measure the length of the leg of piece 1 of the pattern from three-eighths of an inch from the top of the placket slash to within an inch and one half (the hem) of the lower edge. Compare the measurements, and if the drawers are not too long or too short for you, alter them just above the widest part. (Nos. 9 and 10).

If the drawers are too long for you, slash the pattern straight across. (No. 9) The plait is double, so it should only be half as deep as the amount you want to shorten the drawers. That is, if the drawers are an inch too long for you, the plait should be half an inch deep.

large double perforations on the lengthwise of the goods. Pin each piece down securely.

Cut piece 1 and clip all the notches. Do not clip them any deeper than is necessary for you to see them easily. The placket of the drawers is made at the long line in the drawers portion (piece 1) with notches on each side. Slash the material down that line and clip your notches carefully.

You can clip the notches in both halves of each piece of the pattern at the same time if you will be careful to hold the edges together evenly so as to get the notches marked correctly in each half.

When you make up your drawers you must be very careful not to make two drawers for the same leg. You won't have any trouble if you look at the pattern carefully before you start to work.

Cut pieces 2, 3 and 4 now, and mark

the notches and put these pieces away until you need them.

#### The Hems.

Turn up the bottom of the drawers an inch and one-half for a hem. Turn the hem up on the inside of the drawers and pin and baste it along the fold. (No. 12) Turn under the upper edge of the hem three-eighths of an inch and pin it to the drawers. Baste it inside the fold edge and hem it with small even stitches. (No. 12.)

#### The Drawers Placket.

The placket that is used on drawers and other underwear is called "the underwear placket." (Nos. 13, 14, 15 and 16.) It is made by pieces 3 and 4 of the pattern.

The Underlap—Take one of your underlaps (cut from piece 4 of the pattern) and pin it to the wrong side of the drawers with its double notches matching the double notches in the front edge of the placket opening and its triple notches matching the triple notches in the back edge of the opening. (No. 13.) These edges should be even. (No. 13.) Baste them together beginning at the top of the opening. At the top of the placket the basting should be one-quarter of an inch from the edge of the placket, but it should taper out almost to the edge at the bottom. (No. 13.) Sew the underlap to the placket opening with fine running stitches. (No. 14.)

Turn the underlap over on the right side of the front of the drawers and fold it so that the sewing of the seam comes exactly in the crease (No. 14), and baste it along the fold (No. 14) to the bottom of the opening. Turn in the edge of the underlap three-eighths of an inch and pin it to the drawers to the bottom of the opening. (No. 14.) Then baste it along the fold edge. (No. 14.)

The Overlap—Take one of your overlaps (cut from piece 3 of the pattern) and join it to the underlap with their single notches matching. (No.

15.) The pointed end of the overlap goes toward the bottom of the placket. (No. 15.) Pin the underlap and overlap together with their edges even and baste them three-eighths of an inch from the edge (No. 15.) Sew them together with running stitches.

Turn under the other long edge and lower edges of the overlap and crease them between your fingers. At the points at the bottom of the overlap you'll have to lap the turned-under edge to keep the points a good shape. (No. 15.)

Turn over the overlap on the right side and fold it so that the sewing of the seam in the underlap and overlap come exactly in the crease. (No. 16.) Baste it along the fold edge.

Baste the overlap to the drawers with its long edge just covering the sewing of the underlap (No. 16) and its pointed end at the bottom of the placket. (No. 16.)

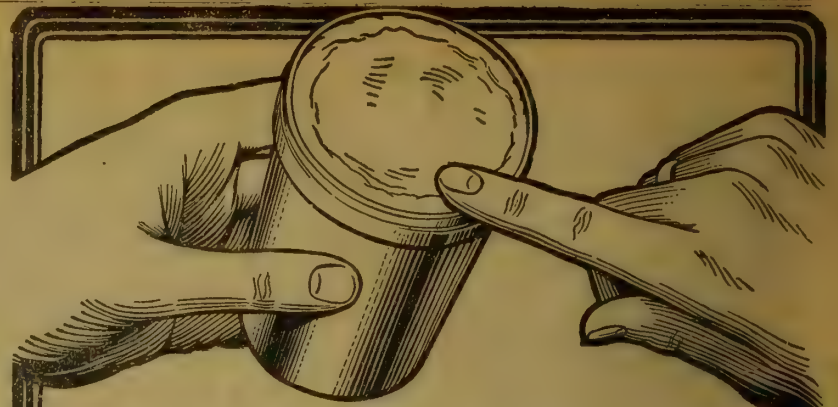
Hem the long edges of the overlap and underlap to the drawers with small fine stitches. (No. 16.) Backstitch the pointed end (No. 16), as backstitching is stronger than hemming, and the hardest strain in wearing comes at this point.

#### The Continuous Placket.

This is another placket that is frequently used on drawers, though it is more frequently used for petticoats that have no fulness at the top. It is just as neat as the underwear placket, but it is not as strong. However, it is used a great deal and many people like it because it is simpler than the other.

The continuous lap for this pair of drawers is cut by piece 5 of the pattern.

I have no use for the idle man who goes about telling now liberal he would be if he had an industrious man's money.



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PLEASE NOTE WHAT OUR ADVERTISERS OFFER THIS WEEK WHEN FOLLOW THE ADS FROM WEEK TO WEEK—GET THE ADVERTISING HABIT.

**CANNING OF SOUPS.**  
How to Prepare Stock—Economical Use of Products Which Might Otherwise be Wasted.

At times it is a great convenience to the housewife to be able to reach to a shelf for a can of soup, open it, heat it, and serve it within a few minutes' time. The Department of Agriculture's specialists in home canning-club instruction point out that the next logical step for the club members after learning to can fruits and vegetables is to transform meat scraps, bones, ligaments, and odds and ends of vegetables and cereals into an economical, as well as palatable, soup—something that can be made ready in a few minutes for use as a hot dish.

**Directions for Making Soup Stock.**  
Secure 25 pounds of beef hocks, joints, and bones containing marrow and strip off the fat and meat, cracking the bones with a hatchet or cleaver. Place the bones within a thin cloth sack and put them into a large kettle containing 5 gallons of cold water. Simmer, but do not boil, for 6 or 7 hours, then skim off all fat from liquid. Do not salt while simmering. This should make about 5 gallons of soup stock. Pack the stock while hot in glass jars, bottles, or enameled or lacquered tin cans, and partially seal the jars; if tin cans are used, cap and tip. If using a hot-water bath outfit, sterilize for 40 minutes; if using a water-seal or 5 pounds of steam pressure outfit, sterilize for 30 minutes, or 25 minutes if using pressure cooker outfit.

**Vegetable Soup.**  
A good vegetable soup may be made, according to the department's experts, as follows: Stock one-fourth of a pound of lima beans and 1 pound of rice in water for 12 hours. Cook one-half pound of barley for 2 hours. Blanch 1 pound of carrots, 1 pound of onions, 1 medium-sized potato, and 1 red pepper for 3 minutes in boiling hot water, and then quickly dip into cold water. After this is done, the carrots, onions, potato, and pepper should be cut into small cubes and mixed thoroughly with the lima beans and rice which have been cooked as described above. Fill the glass jars or lacquered or enameled tin cans three-fourths full of the above mixture of vegetables and cereals. The next step is to prepare a smooth paste from one-half pound of wheat flour blended with 5 gallons of soup stock. Boil this mixture for 3 minutes and add 4 ounces of salt. Pour this mixture or stock over the vegetables until the cans are full. Partially seal the jars, or cap and tip the tin cans, and sterilize for 90 minutes if using a hot-water bath outfit; 75 minutes if using a water-seal or 5 pounds of steam pressure outfit; or 45 minutes if using pressure cooker.

**Cream of Pea Soup.**  
Soak in water overnight 8 pounds of dried peas. Cook the peas until they are soft, and then mash them fine. Add to the mashed peas 5½ gallons of soup stock, and bring the whole to a boil; then pass the boiling liquid through a fine sieve. Make a smooth paste by mixing one-half pound of flour and a little water; add 10 ounces of sugar and 3 ounces of salt, and add the whole to the peas and soup stock. Cook the whole until the soup begins to thicken and then pack in the glass jars or tin cans. Partially seal the jars, or cap and tip the tin cans. If using a hot-water bath outfit, sterilize

for 90 minutes; 80 minutes if using water-seal outfit; or 45 minutes in pressure cooker.

**Cream of Potato Soup.**  
Boil 1½ pounds of potatoes, sliced thin, with 5 gallons of soup stock, for 10 minutes. Add 3 ounces of salt, one-fourth teaspoonful of pepper, and one-half pound of butter, and boil slowly for 5 minutes. Make 3 tablespoonfuls of flour into smooth paste and add to the above. Cook 3 minutes and pack in glass jars or tin cans while hot. Partially seal the jars, or cap and tip the tin cans. Sterilize 90 minutes if using hot-water bath outfit; 75 minutes if using water-seal outfit; or 45 minutes if using pressure cooker.

**Bean Soup.**  
Soak 3 pounds of beans 12 hours in cold water. Cut 2 pounds of ham meat into ¼-inch cubes and place in a small sack. Place beans, ham, and 4 gallons of water in kettle and boil slowly until the beans are very soft. Remove the ham and beans from the liquor and mash the beans fine. Return ham and mashed beans to the liquor and add 5 gallons of soup stock and seasoning and bring to boil. Fill into glass jars and tin cans while hot. Partially seal glass jars, or cap and tip the tin cans. Process 2 hours if using hot-water bath outfit; 90 minutes if using water-seal outfit; 75 minutes under 5 pounds of steam; or 60 minutes in pressure-cooker outfit.

**AN ICELESS REFRIGERATOR**  
In sections of the country where the powers of evaporation are rapidly invoked one finds the home-made iceless refrigerator in use. These unique cold-boxes are scattered all over the country that lies south and west of the Rock mountains. It only takes a spare half-day to build such a refrigerator, the material ought not to cost more than \$1.50, and the convenience and saving of such an arrangement can scarcely be estimated.

Old lumber may be used, but it is better to use uniform stock, for the sake of appearances. Use 1x3 in making a box frame three feet long, forty-two inches wide, and three feet high. The roof may be shaped, flat or convex.

When the box frame is complete, nail some 1-3 studding all the way around, on the inside. Then stretch muslin over the studding to form a lining for the box frame. Shelf supports should then be nailed horizontally on the inside of box.

The outside of the box frame calls for a cover of burlap stretched tight and tacked firmly along the edges and at the corners. A solid bottom may be nailed into the box. The door at the front should be made to overlap the opening, and should be made as nearly airtight as possible.

Pieces of 1x3 material nailed perpendicularly at the four corners of the frame may be made to serve as legs upon which to hold the box a foot or so above the ground. In order to forestall any possibility of ants climbing up the refrigerator legs and contaminating the contents, set each leg of the refrigerator in a small crock filled with water.

On top of the box place a pail or a deep pan, and fill it nearly full of water. Take long strips of woolen or burlap, sink one end of each strip into the water, and allow the other end to dangle over the side of the vessel and come in contact with the burlap.

The theory of this sort of an ice-

less refrigerator is that the strips of woolen or burlap, which each have one end sunk in the vessel of water, siphon, or drink the moisture out of the container like a blotter absorbs ink, and conduct it to the burlap cover of the box.

The burlap cover immediately absorbs all of the free moisture and, for that reason, stays moist so long as any moisture remains in the vessel on the roof. Owing to the fact that the walls of the box are made of muslin and burlap, there is always a free circulation of air through the box.

Because the outside of the refrigerator is constantly moist, evaporation is going on constantly. The rapid evaporation on the exterior causes the warm air to be absorbed from the inside and from the walls of the box, and so cool temperature prevails within the iceless refrigerator so long as its exterior remains damp.

With such an iceless refrigerator as is herein described it is possible to keep a brick of butter almost as solid as it was when it was removed from ice. Milk and cream will remain sweet and untainted for at least forty-eight hours, and dressed poultry can be kept therein for about thirty-six hours during the most severe summer heat. The home-made iceless refrigerator should be kept in an airy summer-kitchen or else in a shady place out-of-doors.—Am. Thresherman.

**JUST LIVING**  
By Prof. Frank Goeder, Colorado College of Agriculture.

A middle-aged man sitting on the door steps with a thoughtless expression on his face was asked the following question: "Why do you sit and sit, what are you doing?" The ready reply was, "Just living, that is all."

Too many people go through the world without seeing the beauty and the wonderful side of life, but are just living, seemingly there is nothing that they can do.

Why not start to thinking, when there is so much to be done? Ask yourself some questions and proceed to answer them and be surprised at the outcome. Did you ever stop to think what makes the planets keep moving, and what holds them on their orbits out in the infinite space? What causes the vapor to rise when heat is applied to a liquid? What causes the noise which follows an explosion? Such questions may be asked by the hundreds, and still to all these there is an answer. How wonderful it is to be able to converse upon such questions and give thought to them instead of letting them pass unnoticed.

It seems to me there is no better subject that will start the young man or woman to thinking, and develop that dormant phase of life than the study of the science of Physics. In this subject we are awakened to the fact that these things exist and the reasons are given in such a manner that there is plenty of room to expand upon them. Start to thinking, and when we see the effect let's get at the cause.

A young lady about to be married received from a chum as a wedding gift a broom with a tag carrying this message:

"For this, thy happy wedding day, A broom I thee will send. In sunshine use the lower part, In storm, the other end."



# Fleas and How To Get Rid of Them

To permanently get rid of the pests they must be attacked in their breeding places. Persons whose houses, pet animals, or live stock are infested with fleas are warned, that it is almost hopeless to get rid of the pest if no attention is paid to the breeding places of the insects. It is, of course, important to destroy the adult fleas but this should be accompanied by a thorough cleaning out of all places in which their eggs may be laid. Since it takes from two weeks to many months for the eggs of fleas to develop to adults there is always danger of a reinfestation unless the breeding places are thoroughly destroyed.

It is a well known fact that certain kinds of fleas are responsible for the spread of the bubonic plague and this alone would make their destruction a universal duty. They are, however, responsible for other disease as well as the plague, and entirely apart from their share in spreading contagion they are a great nuisance to human beings, and may annoy live stock to such an extent that they seriously injure the health of the animal. The flea can exist practically everywhere that man can, and if the conditions are permitted to be favorable it will multiply with great rapidity.

Of the approximately 400 species of fleas known to exist the human flea, the dog flea, the cat flea, the rat flea—which carries the plague—and the sticktight flea are the varieties which most commonly affect human beings and domestic animals. The sticktight flea differs from the others in that when it has once attached itself to a host it remains with its mouth parts immovably imbedded in the flesh. Chickens suffer in particular from this pest and for this reason it is sometimes called the chicken flea. It is frequently seen in dense masses also on the ears of dogs and cats. It is difficult to loosen it from its hold and its destruction therefore presents some difficulties. Fairly good results are obtained from the local application of kerosene and lard in the proportions of 1 part kerosene and 3 parts lard, but if used to freely this may injure poultry.

In the case of other species the insects hop about much more freely and may or may not, therefore, be found at any given time on their hosts. When dogs or cats, however, are found to be suffering, a bath in a 3 per cent solution of creolin will probably be found to be effective. A sufficiently accurate method of making such a solution is to add 4 tablespoonfuls of creolin to each gallon of water. Warm water should be used and the animal placed in a tub with the solution in it. A stiff brush should then be used to work the solution into the hair, particular care being taken to wet the fleas on the head of the animal. The bath should last 5 or 10 minutes, after which the creolin should be rinsed off and the animal washed with warm water and soap. This treatment is desirable for cats, and will prevent the skin of the most delicate animal from being burned. Finely pulverized moth balls worked into the fur of the cat are also useful. The naphthalene in the moth balls drives the fleas out of the hair. They emerge in a stupefied condition and can then easily be killed. Insect powder, sometimes called pyrethrum,

bubach, or Dalmatian insect powder, may be used in the same way. Fresh, unadulterated pyrethrum is necessary to secure satisfactory results.

It has already been said, however, that it is useless to attack the adult flea if no attention is paid to its breeding places. The flea may lay its eggs upon the host animal, but in the case of the human flea most of the eggs are probably deposited while the insects are in their nests somewhere in the vicinity. In houses the cracks of floors or under matting or carpets are favorite places. The conditions under buildings are often favorable for breeding. For this reason it is desirable that dwellings, stables, and sheds should be so arranged that cats, dogs, chickens, and other animals that harbor the pests can not go beneath them to sleep. Dirt floors in chicken houses and sheds furnish more favorable conditions than wooden floors, and young fleas are often found in the straw, feathers, and waste in such places. Where chicken houses and sheds are found to be infested the manure should be hauled away and spread in fields. Unnecessary rubbish and dry animal matter should be piled up and burned. The ground, the floors of out-houses, and similar places where the breeding is supposed to occur should be sprayed with kerosene or crude petroleum sprinkled about. An inexpensive preventive measure is the liberal use of salt scattered about the breeding places and then wet down. Semi-weekly thorough wettings with water have been found to keep fleas out of poultry runs in Texas and salt water from the Gulf is used extensively for this purpose along the coast.

Where it is supposed that dogs or cats are largely responsible for the infestation it is desirable to compel them to sleep in a definite place in order that the eggs from the fleas be concentrated and thus more easily destroyed. A few gunny sacks or a mat for infested animals to sleep upon will be found to contain a great majority of the eggs and these can be destroyed by shaking the cloths over the fire or exposing them on a bare spot to the rays of the sun.

Where fleas are found to be breeding in the house itself the first step is to sweep up all the dust and burn it. Floor coverings should be removed, aired, and beaten, and the floor scrubbed with strong soap suds. Various insecticides have also been found to be effective but many of these are either dangerous to health or injurious to various articles.

Fumigation with sulphur fumes or hydrocyanic acid gas has also been employed to rid dwellings of fleas. Both of these have the additional advantage of killing rats and mice as well as fleas but sulphur is open to the objection that it corrodes metal and injures plants. Hydrocyanic acid gas is so deadly that its use except under expert direction is quite out of the question. In fumigating with sulphur 4 pounds to each 1,000 cubic feet of space should be used. The sulphur is piled up cone shaped in a pan, which is placed in a larger pan or tub of water to avoid fire from the heat generated. A depression is made in the top of the cone of sulphur, a little alcohol poured into it, and a match applied. The room to be

fumigated should be tightly closed beforehand and kept closed from 10 to 12 hours. At the end of that time the doors and windows should be opened from the outside and the room thoroughly aired before it is entered.

Various methods of trapping fleas have been tried at one time or another but none of these appear to be of as much practical value as the methods already discussed. It is well to remember, however, that the flea can not jump upward very far—a few inches being the usual limit—and for this reason if the legs are protected a person is rarely bitten. In plague infested areas where it is of the utmost importance to prevent even a single flea from biting a man fly paper has sometimes been wrapped around the legs and the fleas that jump against it have been caught and killed in this way. In badly infested regions it is also possible to isolate the bed if sufficiently high, by taking care to keep the clothing from hanging down. If the leg of the bed are sufficiently rough to enable the fleas to climb up them, they should be placed in large pans of water or fly-paper should be wrapped around them.

## THE MIDDLEMEN.

In discussing the present marketing organizations the Agriculture Department's specialists do not look upon the "middlemen" altogether as a parasite because economic laws would not permit the long continued existence of a marketing agency that was acting solely as parasite.

Several important factors have contributed to the establishment of many middlemen as necessary agents in the present system of marketing.

Production during the last decade increased greatly, and improved methods and facilities for handling increase have been introduced. Keeping pace with increased production come the demand of consumers more elaborate and efficient service. Seldom is the fact considered that service can become a very expensive luxury. With the widening of the distance between the city and the source of its fruit and vegetable supplies there has arisen the necessity of special agencies to meet the changing conditions.

The present distributive machinery with all its strong points and its weaknesses, has been created of necessity and it has weathered the storm of much adverse criticism. Every part of the country is now enjoying the perishable products of the most remote districts. Any readjustment of present market practices must be based upon the fact that some agency will continue to perform the functions of the present day middleman.

The problem involved in handling goods through a large market differs greatly from those of product. Usually one man or one firm can handle both production and distribution and succeed at both. The volume of business transacted at the market centers makes necessary special agencies which can devote their energies to distribution. Especially does the machinery for efficient marketing become necessary when perishable goods are to be handled. Commodities of this sort must be moved rapidly, must be distributed everywhere and from their very nature permit no weakness in distributive machinery, if they are to be sold at a price

## GET THE "BIG PRICE" FOR YOUR GRAIN

### Farmer Friends, Listen to This

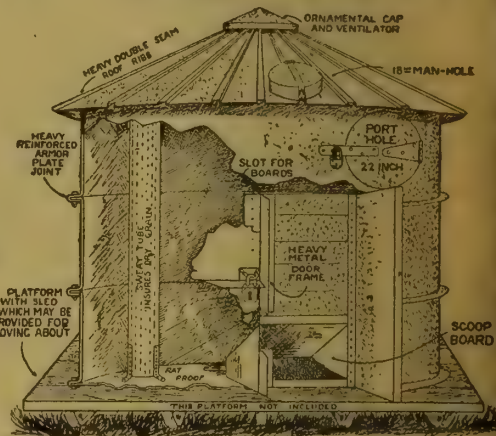
Last year the minute grain was harvested the majority of farmers let go of their crop. Let a young fortune, in many instances slide through their fingers. A couple of months after they had sold their grain the price climbed to nearly double what they received when they sold. But farmers are wiser this year. Once caught—twice shy! This year they'll store their grain in a Columbian Grain Bin. They'll hold their crop until the "Big Price" comes "round. Then they'll sell.

**"BUY A BIN" MOVEMENT SPREADING**

You farmer friends of ours who haven't yet bought your bin, make haste and secure it. The cost is little. That is, if you buy it from us. Why, a few cents advance in grain prices will pay for it. Write today for price and details.

**THE GREAT COLUMBIAN BIN**

You've heard about this bin. America's largest metal bin manufacturers make it. It's theft proof,



The Columbian Bin—Write for Descriptive Folder and Price.

rat proof, storm proof. Heavily galvanized so it won't rust. Built extra heavy and strong throughout. A postal will bring you full particulars.

### THE LOWEST PRICE OBTAINABLE

Remember in buying a bin, this is the house to buy it from. We're right down in the warehouse district of Salt Lake City. Down where the rents are lowest. We have no big overhead expense. We don't have to make big profits to line the pockets of figurehead directors with silver. Every stockholder in the firm of Sam Peterson and Co. is a producer—he works. So our price can be lowest—they are lowest. Buy your grain bin NOW—buy it from us. Write today SURE for prices.

**S. PETERSON & CO.**  
210 SO. 6TH WEST, SALT LAKE CITY UTAH



## THE VALUE OF VENTILATION.

Mary Johnson, Utah County.

Breathing of air over and over is only a slow poisoning and if continued will result in certain death. There is real value in good ventilation, but so few people take time to consider it. Leaving windows or doors open is chance ventilation. If wind is from the right direction it helps some, otherwise they might well remain closed. Other methods of ventilation are better than leaving doors or windows open although they

The Board of Health of New York a few years ago, investigated the cause of mortality in their city and reported that "40 per cent of all deaths was caused by breathing impure air." Further information collected shows that the installation of mechanical ventilation systems in hospitals and prisons reduced death rates ranging from 25 per cent to 80 per cent down to from 5 per cent to 13 per cent." Other cities have made similar surveys, with about the same results.

A study of the subject of air supply has led to the conclusion that buildings should have a sufficient circulation of air, that at no time will there be more than 3.3 per cent of which has once passed from the room. In order to establish this conclusion, according to carefully prepared tables, it is necessary that the circulation in and out of the buildings should be sufficient to supply an average of 4,296 cubic feet per person, per head, for horses, 3,542 cubic feet each for cows, 1,392 cubic feet for dogs, 917 cubic feet for sheep, 351 cubic feet for fowls, and for each person should be at least 537 cubic feet. Not only possible but entirely practicable to furnish this supply without drafts, through scientific methods.

The importance of ventilation is shown in King's philosophy of agriculture where he shows that a 1,000 pound cow requires 30 pounds of hay grain per day and 70 pounds of straw while the air breathed per day is 224 pounds or more than the weight of the feed and water her. He further states, "The most universal health rule which man can follow for himself or for his domestic animals is to avoid whatever tends to weaken the system and to take advantage of whatever tends to strengthen it. It should be clearly recognized that the germs of diphtheria, of typhoid, of cholera and other dangerous diseases are liable to be with almost any day and in any place and that wherever a proper ventilation place may be found the germs are liable to start and from it spread by force of greater number of them. While therefore the micro-organisms usually found in greatest numbers in dusty houses and stables are ventilated and cared for are themselves a source of danger, the poor ventilation is sure to enter and will certainly tend to start a case of contagious disease and then, greater numbers of germs in the air will be introduced into the system, and of great vigor must succumb to these invisible foes because of their numbers. Ample ventilation then always be secured, first as an enabling condition for maintaining power to resist disease, and second, in case of disease, to both clear the air and to give the animals

an opportunity to defend themselves against this type of foe."

If your home or barn is not provided with good ventilation attend to it just as soon as possible. If you are going to build provide plenty of fresh air.

## LAND SPECULATORS.

Only a small part of the land is cultivated. Only about 100 acres that are now cultivated to about 375 which may be cultivated when the country is all settled up.

We are glad to know the interest our government is taking in this matter, here is what the secretary of the Interior F. K. Lane has to say about it.

"There is unfortunately a class of investors, a few in number it is true, who are holding areas of considerable size, including lands for which water has been provided at the cost of the project, and who are living in cities or remote localities. Many of these are not cultivating the ground, or, if using it at all, only in the most perfunctory manner. With these are to be classed certain speculators or dealers in real estate who have purchased lands at low prices or have obtained relinquishments, due to the inability of the former owners to retain the land, and who are holding these lands out of use in the hope of obtaining a profit by raising the prices rather than by raising crops. The result is that in the midst of a tract of highly cultivated small farms, there is occasionally a section or quarter section of land which has been left untouched, or perhaps merely plowed up at some time and which has now grown up to weeds and serves as a refuge for jack rabbits and various kinds of vermin; weed seeds are blown from these fields and infest the neighboring cultivated land; the presence of these deserted areas is not only an eye-sore, but a direct financial injury to all of the neighbors.

"The owners of these lands are endeavoring to make a profit largely out of the labors of the owners of the surrounding lands who, through their toil in the field, are gradually increasing land values in the vicinity. In other words, they are not only freely enjoying the bounty of the government in providing water for the land, but in like way are indirectly levying a toll upon the labor and self-denial of their neighbors.

"No one can argue that these men should have the benefit of extension of time in making payment, as through such benefits it will enable them to hold these lands still longer out of cultivation, advance the prices, increase the load on the newcomer, and further delay the ultimate development of the community and its successful growth.

"The injury to the community and to the state, lies not wholly in keeping these lands out of profitable use, but also by not permitting the rapid growth of resident population. By keeping away many desirable citizens, the burden of pioneering laid upon the remainder is increased notably in the schools, and in all the local institutions so necessary to a growing community."

## WHAT IS A WEED.

A new definition has been suggested for a weed by the Department of Agriculture in a new bulletin No. 660 recently issued. The author of this bulletin is discussing a definition of a weed, says: "A weed has been de-

fined as a plant out of place. This definition is not entirely satisfactory, for two reasons: (1) Because a plant may be out of place and still not be a weed in the popular sense, as rye growing in a wheat field or Kentucky bluegrass in an alfalfa field, and (2) because a plant may not be out of place and still be a weed in popular language, as is described in a subsequent section of this bulletin on the good points about weeds. In reality a weed is a wild plant that has the habit of intruding where not wanted."

The old definition by which a weed was called a plant out of place, while a very catchy phrase, does not clearly represent usage. The hundreds of wild plants which inhabit a field which is not planted to crops are in common usage called weeds; yet the vast majority of these plants are decidedly in place and are serving a useful purpose through adding organic matter to an impoverished soil. While ordinarily all these benefits may be realized through proper rotations, in the absence of the practice of such rotations these wild plants serve a useful purpose, and are "in place," yet usage which invariably determines a definition decrees that they are weeds. They are weeds through the fact that they are wild and have the habit of intruding where not wanted, even though they may at some time serve a useful purpose.

## Market Prices

### Local

The quotations given below are what is being paid f. o. b. Salt Lake City. We find that a difference of 5c to 10c a hundred is paid by the millers or grain buyers in other parts of the state.

Wheat, soft white—\$1.50 cwt.  
Wheat, Turkey Red—\$1.55 cwt.  
Oats—\$1.40 cwt.  
Barley—\$1.05 cwt.  
Rye—\$1.15 cwt.

### Hay

Alfalfa—\$10.00 ton baled.  
Eggs—\$6.20 case 30 dozen.  
Butter Creamery 29c.  
Butter Ranch 25c.

### Chicago Grain Market.

Wheat—September, \$1.05 3-8; December, \$1.04 3-8.  
Corn—September, 75 7-8c; December 64 1-8c.  
Oats—September, 39 3-8c; December, 38 1/2c.

### LIVE STOCK

#### Kansas City.

Hogs—Steady; bulk, \$6.75@7.25; heavy, \$6.50@6.90; packers and butchers, \$6.75@7.25; light, \$7.00@7.30; pigs, \$6.50@7.00.  
Cattle—Steady; primed steers, \$9.50@9.90; dressed beef steers, \$7.80@9.25; western steers, \$7.00@9.00; stockers and feeders, \$6.00@8.25; bulls, \$5.25@6.75; calves, \$6.00@10.25.  
Sheep—Higher; lambs, \$8.00@8.35; yearlings, \$6.25@6.75; wethers, \$6.00@6.50; ewes, \$5.50@6.25.

#### Portland Market.

Hogs—\$7.35@7.60.  
Steers—\$6.35@6.90.  
Lambs—\$6.50.

#### Los Angeles Market.

Beef Steers—\$6.25@6.75.  
Stock Feeders—\$5.00@5.50.  
Hogs—Heavy, \$6.00@6.50.  
Hogs—Mixed, \$7.00@7.25.

## The Sugar Used In Europe

What sugar is used to make the superb confections which come from Europe?

Some may say "cane," but if they do, they'll be wrong. European confections are made from beet sugar, and refined by the same process as that used in the manufacture of Utah-Idaho Sugar.

So superior has beet sugar proven for fine pastry and confections that it is universally preferred throughout all of Europe. Before long the same condition will prevail here. Utah-Idaho Sugar, and other sugars in its class, will eventually win the approval of all American sugar users. You should insist on—



## Fall Rye

and

## Turkey Red Seed Wheat

LOWEST PRICES

## Vogeler Seed Company

SALT LAKE CITY, UTAH.

Hogs—Light, \$7.25@7.60.  
Sheep—Wethers, \$5.25@5.75.  
Sheep—Ewes, \$4.75@5.25.  
Pacific Coast Horses.  
Heavy Drafter 1700 and up \$275.00 @300.00; light, 1550 to 1650, \$175.00@200.00; wagon horses 1250 to 1350, \$125.00@140.00.

## THE LIMIT.

Having listened patiently to the tall tales about dogs, the man in the corner butted in. He said:

"I have a dog that makes all yours seem fools. I generally feed him myself after dinner, but the other day a friend dropped in and the poor animal slipped my mind. After the meal we went into the garden. The dog scratched up a flower and laid it at my feet, with a most yearning look in his eyes—it was a forget-me-not."

Nobody told any more dog stories that evening.

When writing to advertisers, say you saw their ad in the Utah Farmer.



## Driving to The Pasture

By Ben R. Eldredge.

I recently stood on a street in one of our farming towns noticing the cows as they were driven from the homes in the town to the pastures on the outskirts. One herd of seven head came trotting by, followed by a boy on horseback, and a dog. The dog was active, so was the boy. He had a whip that was in constant play and the pony he was driving zig-zagged at a good gait from side to side of the road in such a way that those cattle did not slow down from a good trot in a distance of at least three blocks—about three-eighths of a mile, and they were trotting when I first saw them. There was no pasture within another half mile. This was not only one case that I observed in that town. It was common to see the cows driven on the trot. Now, anyone who stops to think cannot fail to see the injurious effect of that kind of treatment. I was in that town three days, morning and evening and I sometimes saw the cattle returning from the pasture in the same lively manner, and when cattle are driven from the pasture in that manner, arriving at the home yards in a heated condition, panting and perspiring, their milk is not fit to be used by children. In many instances it may result in serious complications when given to very young babies and these cows that I have referred to above were family cows. A boy sometimes doesn't think but he is teachable and should be taught. A boy on horseback and a dog is a bad combination for driving dairy cows, and this combination alone is often responsible for a loss in the returns from a small herd of cows kept in town and driven a mile or a mile and a half to the pasture, and it is very seldom that the boy has had explained to him that driving a cow rapidly over the road is a bad thing for the cow. Very often he starts to the pasture thinking of something he wants to get done later in the day. His pony is free and knows the way and unnecessary hurry results; and sometimes the dog is the worst factor in this combination. He ought to be left at home. In fact, I have never been able to figure out a place for the dog in handling dairy cattle. They should be handled with as little hurry as possible, never jostled, never crowded over bridges or through gates, and the pastures should be located as near as possible to the milking shed.

Dairy cattle don't need violent exercise; in fact, such exercise is invariably followed by a diminished yield in milk as well as by unbalanced condition in the composition of the milk. This is a simple fact and yet one that is very often lost sight of entirely.

### THE SUNFLOWERS.

According to Dr. Cardiff of the Washington Experiment Station, the sunflower is an important agricultural crop, though it has not been used to any great extent in this country. It is cultivated quite extensively in Russia and used for a variety of purposes. It makes excellent silage, especially when mixed with corn and some legume in about equal parts of each. The seed has an unusually high oil and protein content. On account of the latter its growth rapidly exhausts the nitrogen from the soil

and, therefore, if grown successively on land, the soil will require considerable fertilizer. The oil portion does not exhaust the soil since the elements from which oil is made come from the air and water.

The seed is used in the production of oil, which is extracted by compression, and is of value for table use, cooking purposes, and in general the same use as is made of olive oil.

In Russia the seeds of the larger seeded varieties are sold as peanuts are in this country, and eaten raw. The plant has also been used quite extensively in paper manufacture in some of the European countries.

The sunflower should be grown upon soil which is suitable for corn and planted and cultivated about the same as corn, though it will stand a little earlier planting than the latter on account of its greater resistance to frost. It is a crop well worthy of further attention in some portions of this state.

### HAVE SEED TESTED.

The Seed Laboratory of the Department tests agricultural seeds and furnishes information essential to the farmer which he can not reasonably be expected to obtain for himself. Anyone may submit samples with a request for information upon the following points:

- (a) Trueness to name—whether the seed is misbranded or not.
- (b) Presence of adulterants—whether the seed contains seed of inferior kinds of similar appearance.
- (c) Proportion of pure seed present.
- (d) Proportion and kinds of weed seeds present.
- (e) Proportion of chaff and dirt present.
- (f) Proportion of pure seed that will grow.
- (g) Region of origin.

This work makes it possible for farmers to avoid the use of seed which is misbranded or adulterated, which is low in purity through the presence of noxious weeds or worthless material, or which will not grow, and removes the chief controllable difficulty in the way of securing a good stand in the field.

The effect of the work, however, extends much further than to the actual lots of seed analyzed. Seedsmen are becoming acquainted with the growing custom of farmers sending their seeds to be tested, and a seedsmen does not offer poor seed to the man who he expects will have it tested before buying.

Seeds may be submitted for test to the Seed Laboratory at Washington, D. C., or to any of the branch laboratories maintained in co-operation with the agricultural experiment stations in the States of Louisiana, Missouri, Indiana, California, and Oregon.

### HARVEST HANDS CARRY CHOLERA.

The reason that hog cholera is more prevalent in the latter part of the summer and fall is that farmers are exchanging work during harvesting the threshing, and do not take precautions against carrying the germ that produces hog cholera from infected to clean premises.

It is not a good plan to thresh in hog lots or allow hogs to run to straw stacks. If cholera exists in the neighborhood, some of the help may come from an infected farm and leave infection which will be picked up by the pigs.



**REST A WEEK**  
or so at the Beaches  
Long Beach—Venice  
Catalina  
Then see the  
Expositions.

Three Daily Fast  
Trains leave Salt  
Lake City 8:45 a. m.  
1:00 p. m. 5:00 p. m.  
Ticket office 10 East  
Third South  
Phones 3501-3502

**\$35.00 to San Diego  
And Return  
Direct  
Tickets on Sale Daily  
Limit 3 Months**

**\$35 to Los Angeles  
or San Francisco  
Tickets on Sale Daily  
Limit 3 Months**

**\$62.50 to Los Angeles  
Return via  
Portland  
3 Months Limit**

**Go via  
Los Angeles  
to the  
Expositions**

## Summer Excursion

Via



Following Rates Apply From Salt Lake City.

### EAST

Denver	\$22.50
Colorado Springs	22.50
Omaha	40.00
Kansas City	40.00
St. Louis	51.20
Memphis	59.85
Chicago	56.50
Minneapolis	53.85

Correspondingly low rates to  
many other points.

### SELLING DATES

August 4, 11, 18, 25;

September 1, 8, 15.

Limit, October 31.

Stop-overs; Diverse Routes.

### WEST

Portland	\$37.00
Seattle	44.50
Tacoma	42.80
San Francisco, via Ogden,	35.00
do, one way via	
Los Angeles	35.00
do, one way via	
Portland	53.50
Los Angeles, via South-	
ern Pacific	40.00
do, one way via	
Salt Lake Route	35.00
do, one way via	
Portland	62.50

Side trip rate Los Angeles to  
San Diego and return via rail  
\$5.00, and via steamer \$4.00, in  
connection with circuit tour  
tickets.

Tickets on sale daily to No-

vember 30, 1915, inclusive.

LIMIT, three months from

date of sale, but not to exceed

December 31, 1915.

### NORTH

Excursions to northern Utah  
and Idaho points, August 14,  
28; September 11, 25.

Proportionately low rates from other Oregon Short Line  
Stations—See agents.

**HOTEL UTAH**  
City Ticket Office



For the Buyer

THE FARMERS' MARKET PLACE

For the Seller

THE GEM HERD.

Improved Chester White Swine

The Home of the Western Prize Herd

My winnings at Idaho State Fair 1913, were 13 first, 3 seconds, champion boar and sow, and champion fat barrow. At a Tri-County fair held at Jerome, Ida., I took all but one second. I have anything wanted in Chesters from a weaning pig to a champion boar or sow at prices all can afford. High class stock. Write me.

For Reference—all old customers.

GEO. H. LAWSHE.

Falls City, Idaho

WANTED—To buy from grower, as soon as new crop is harvested for 1916, seed—500-1000 bushels field peas. State kind and price.

OWEN G. ARNOT

Hylton Nevada

FOR SALE

A few choice registered and Grade Holsteins, including a yearling grand son of "The King of the Pontiacs."

GEO. A. DIXON

Garland Utah

WE MAKE WHAT WE CALL

A Debt Reducing Loan

YOU CAN PAY OFF THE PRINCIPAL GRADUALLY.

MILLER & VIELE

FARMS LOANS

803-7-Kearns Bldg.

Salt-Lake City.

Sheep, Cattle

Stallions, Jacks

FOR SALE

Pure bred Cotswold's, registered and non-registered, in small or large lots. Registered Shorthorns. Beef and milk strains

ROOSEVELT LIVE STOCK CO.

CLEVELAND, IDA.

Edwin Bennion. W. R. Smith

BUTTER WRAPPERS

We carry a large stock of the Best Vegetable Parchment Butter Wrappers and Especially Prepared Ink for Printing the same. We furnish them Postage Prepaid at the following Prices, money to accompany order.

100 ..... \$ .90

200 ..... \$ 1.25

500 ..... \$ 2.00

1000 ..... \$ 2.75

Send all orders to

THE UTAH FARMER

LEHI, UTAH

WHY NOT ADVERTISE?

If you have some pure bred stock and want to sell them, why not use a little advertisement on this page? It will bring results. Try it.

Mr. Secretary of County Fairs:

The United Theatrical Association, Ber-Christy, General Manager, 714 McIntyre building, is in a position to furnish you with first class legitimate attraction for your fairs. We have balloon men, aeroplanes, slide for life, high wire, fly trappers, high dive, or any legitimate amusements. Let us figure with you.

GOOD TASTE SAVES LABOR

AND EXPENSE IN PLANTING

THE HOME GROUNDS.

A great many persons who are desirous of having beautiful home grounds make the mistake of overdoing in the matter of planting shrubbery and trees. A few trees carefully selected and properly placed about the home grounds are much more to be desired than the indiscriminate planting so often resorted to in both town and country.

Many people do not realize that quality and taste can be displayed in efforts at landscape gardening as well as in the decoration of the interior of the home or in the selection of personal attire. The man who plants his front yard to trees using the all-over, rows-intwo-directions plan has taken steps to secure what will prove to be a gaudy, cheap effect as his trees mature. At the same time he will have used more trees, costing a greater outlay in money and labor than if he had tastily arranged them in clumps and groups about his walk and along the sides or in the corners of his yard. By the latter plan he will reserve for those occupying the house, pleasing vistas of the road or street and proper expanses of green sward for appropriately set clumps of shrubbery or beds of flowers. He will have also secured for the passing public a much more pleasing view of his house and grounds and both will appear much more pretentious than if the grounds were improperly laid out.

It is not the aim of the writer to give the impression that one can secure quality in home grounds merely by proper placing of what is planted because he may so select improper species as to size at maturity, color of foliage, flowers, etc., as to still defeat his effort in this direction. A knowledge of what plants may do well in the sun, what ones in the shade which plants will stand the driving wind, and which ones should have the protection of others, or of buildings, should be had in order that complete success may be attained. A little careful study of properly planted grounds or of bulletins giving proper methods will save those so doing money and effort and approach ideals which are much more likely to be realized as the planting plan approaches maturity—C. H. Chattuck, Professor of Forestry.

WHEAT AFTER FALLOW

At the Rothamsted Experiment Station in England wheat has been grown continuously and also alternating with fallow for fifty-eight years. The records of the station have the following to say regarding the work:

"It will be seen that the produce

RICHARDS DEFENDER

The Sire of Durocs With Immense Size, Extreme Length and Bone Excellent Feet.

250 Choice March and April Pigs ready for delivery now. Can furnish Boars and Sows not related to each other.

Also a few Choice Sows bred to RICHARDS DEFENDER and VIRGINIA ILLUSTRATOR, a Giant Son of the 1000 Pound Illinois Grand Champion ILLUSTRATOR, who sold for \$2000.00.

When you buy Durocs buy from an old and reliable firm who guarantee to please you or refund your money.

RICHARDS LIVE STOCK CO.

Successor to Richards Brothers.

VIRGINIA IDAHO

Have You Any Livestock

to Sell?

What we have done for others we ought to be able to do for you. You may have some surplus stock that you would like to sell. A small advertisement on this page will do it. Here is the test, read this letter.

STATE INDUSTRIAL SCHOOL

OGDEN, UTAH

August 5, 1915.

The Utah Farmer:

Lehi, Utah.

Gentlemen:—Enclosed you will find our check in payment for advertising space in your paper from July 3rd to July 31st.

In as much as we have sold all our stock which we advertised we shall deem it a favor to kindly discontinue our add and wish to express our thanks for services rendered and appreciate the promptness with which we disposed of our stock, through the medium of your paper.

Kindly sign the enclosed voucher slips and return them at your earliest convenience.

Respectfully,

State Industrial School

Per M. G. GRAAF,

Clerk.

of wheat after fallow is considerably higher than when it is grown continuously, 17.1 bushels against 12.7 bushels per acre; but if reckoned as produce over the whole area, half in crop and half fallow, the whole area grows much less of both grain and straw than where the crop is grown year after year on the same land. A given area of land would therefore be more productive when cropped every year than if the crop were alternated with fallow. The superior yield of the portion in crop after a fallowing may in some degree be attributed to the greater freedom from weeds, but in the main it is due to the production of nitrates from the humus of the soil during the summer when it is fallow, a process which is much stimulated by the stirring it receives and the consequent aeration. The success of a fallowing depends upon these nitrates remaining for the succeeding crop. They may be entirely washed to by heavy autumnal rain.

ALFALFA AND SORGUM SILAGE

Indications are that excellent silage can be made with mixtures of alfalfa and sweet sorghum, according to silage investigations in progress at the Agricultural Experiment Station of Nebraska. Such mixtures containing one-half alfalfa and one-half sorghum cane, put up on a small scale, give perfect silage three months after siloing. The acidity is somewhat lower than normal silage but this does not seem to impair the keeping qualities. Further investigations of this subject are in progress, but the present results would indicate that a farmer might safely put equal parts of alfalfa and well-matured sorghum cane in his silo with expectation of securing a good quality of silage.

Railroad Attorney—"You are sure it was our Flier that killed your mule? What makes you so positive?"

Rastus—"He dun licked ebry other train on de road."

Mrs. Henpeck—"Is there any difference, Theodore, do you know, between a fort and a fortress?"

Mr. Henpeck—"I should imagine a fortress, my love, would be harder to silence!"



## Purifying The Drinking Water

With the return of the harvesting season the prevention of typhoid fever, dysentery, and other intestinal disorders in the rural communities, and especially among harvest crews, needs special attention. These diseases are caused by certain bacteria and they are commonly present in polluted water. The use of water, therefore, from old wells, streams, etc., which is often necessary during the harvesting season, is always attended with danger and something should be done to purify such water before it is used for drinking purposes. Professor C. A. Magoon, gives the following method for the purification of water:

For the destruction of all dangerous bacteria which may be in water nothing equals in efficiency and convenience ordinary chloride of lime. This may be obtained from almost any grocery store in 10-cent cans and the amount required is so small as to make the cost for the entire season almost negligible. It should be used in the following manner:

One tablespoonful of the chloride of lime is dissolved in ten quarts of water. This quantity is sufficient to treat 1000 gallons of water, and the operation is carried out by simply pouring the clear solution into the water to be treated and stirring thoroughly. This solution is a powerful germicide and its action is very rapid—ten minutes or so being all the time required to carry out the purification. One quart of this solution is sufficient to treat effectively a tank containing 100 gallons of water and one pint of it stirred into the 50-gallon water barrel filled with water will destroy any dangerous germs and make water safe for drinking purposes. The solution should be prepared fresh each time as it loses strength on standing, and the can of chloride of lime should also be kept tightly closed until needed again.

One is cautioned against the use of too much of the chemical, not because it is dangerous at all, but because an undesirable odor or taste may be imparted to the water where too large amounts are used. The strength of solution indicated above used in the manner described will be found perfectly satisfactory. The qualities of the water will in no wise be impaired and no undesirable conditions will arise from its use. On the other hand dangerous water may be made safe and much sickness prevented.

### HIS MONEY'S WORTH.

Scotch Father: "And you must ha' seen a lot of sights in London, eh?"

Scotch Son: "Not so muckle. They charged me six shillings a day for my room at the hotel, and you dinna suppose I was going to pay that without staying in the room and getting my money's worth?"

### TOO MUCH.

P. C. (to festive gent): "Now, sir, what's the trouble?"

Festive Gent: "I've lost me (hic) umbrella."

P. C.: "Why, it's hung on your arm, sir."

Festive Gent: "Sho it ish (hic). If you hadn't told me I should have gone (hic) home without it."



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OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE

VOLUME XII; No. 4

LEHI AND SALT LAKE CITY, UTAH

AUGUST 28, 1915

## Tile Drainage of Dry-Farm Wheat Lands

By J. C. Wheelon, Chief Engineer, Utah-Idaho Sugar Company.

The Utah-Idaho Sugar Company is no doubt the largest dry farm wheat grower on tile drained land in the state of Utah, and possibly in the entire inter-mountain region. This company during the past four years has reclaimed large areas of land belonging to themselves and their neighbors in Box Elder county, and in which they have placed nearly one hundred miles of drain tile.

In this work is included lands that have once before been farmed, as well as those of the virgin desert, and the work being carried on upon a very large scale naturally offers special and unusual opportunities for investigation and research.

We are reclaiming hundreds of acres of sage brush lands that have never been farmed before, and has never been water-logged nor mineralized and we are tile draining every acre before a crop is planted on them.

The reclaiming and farming of these lands is done solely for commercial purposes and, while the work is not intended for experimental demonstrations, yet, to the careful observer, many interesting and valuable lessons are taught. And the lovers of good farming and the patrons and supporters of our agricultural colleges will be much gratified to know that in this work we are constantly enabled to invest our agricultural problems with scientific methods of solution.

We gathered and applied to this work such knowledge and information as the literature on the subject, as well as personal observation, afforded, and, while we tiled our land for the primary purpose of removing the ground water, we have been forced to conclude that this is one of the least of the beneficial results of tile drainage.

The reader must understand that our plan in drainage is comprehensive. We do not seek the low lands in a field and by placing a tile drain along the swale, consider the farm drained; on the other hand, we treat the farm all alike; we drain the land that is apparently free from ground water with just as much attention to lines and distances as we do the tule swales.

We have one block of land in one system which comprises two whole sections, each a mile square; some of it was water-logged; some of it had been farmed and abandoned; some of it had never been water-logged and

was producing good crops; and some of it was in sage brush that had been killed by water; and some of it was in sage brush as fresh and unharmed as that on the bench lands that was admittedly out of the irrigated zone entirely—yet all was treated just the

less fertile valley lands, he would not hesitate to mortgage his life insurance, if necessary, to tile drain the farm as soon as possible, and would regard it as the best investment he could make.

Now, when a man makes a proposi-

4th. Transforms a cold, heavy soil to warm, friable soil.

5th. Increases the depth of soil available to plant life and makes possible an extended range of roots with consequent increase in vigor and growth of plants.

6th. Increases the readiness of the land for earlier cultivation.

7th. Enables the soil to receive and retain the largest amount of capillary moisture and this increases its ability to withstand the annual drought.

8th. Promotes quicker start and growth of crops.

9th. Produces the partial or entire immunity of the bad effects of frost which heave the ground and breaks and exposes the roots of crops growing upon the land.

10th. Improves sanitary conditions of the drained district.

11th. Experience has shown that it will increase the value of lands and remove harmful alkali.

12th. It permits the surface moisture to reach a lower strata of soil quickly where it is not readily exhausted by evaporation.

In the summer of 1913 we brush cleared and plowed 960 acres of sage brush land, 480 acres of which were tile drained; the land was all prepared and planted to "Turkey Red" fall wheat at the rate of 38 pounds per acre. The grain made no showing in the fall, as the plowing and replotting of the land in removing the brush left no opportunity for mulching the surface, and, as a consequence, the reserve moisture was lost. The grain was planted in October, 1913, and harvested in the last week of July, 1914, during which time 11 inches of precipitation had fallen, about half of which fell before the first of April. The yield on the tile drained land being 10½ bushels per acre more than that on the untiled land, the heads were well filled and the grain was especially even in size and quality.

The first notable difference was observed in the spring when the frost went out of the ground. The water percolated the soil and disappeared into the ground much faster on the tiled than on the untiled land. The ground had no tile to become puddled and consequently the soil did not bake and crack; the spring rains disappeared into the soil quickly, because the earlier waters had gone down in advance, leaving pore spaces to advance, leaving pore spaces to advance.

(Continued on page thirteen)



same, the tile lines were laid with the same regularity throughout the tract (430 to 450 feet apart), and to this method we owe very many of the valuable lessons taught in aeration, movement of capillary moisture, elimination of poisonous soil gases, etc.

So numerous and varied have these lessons occurred in our practice that those of us who are farming over tile drains would not think of operating an irrigated farm without draining it, and many of us would also tile drain the dry farm wheat and barley land as well. The writer is willing to say that if he owned the best dry farm on our rich and fertile bench lands or the poorest dry farm in the lower and

tion, or advances a theory, or invests his own or his employer's money, he should be able to fortify his position with at least one good and substantial reason. Below are submitted twelve reasons for tile draining farm lands, and I desire to assert here that any two of them will make tile drainage a paying investment, and I want you to take particular notice that the words "water" and "alkali" are used only once each.

1st. It removes excess water.

2nd. It aerates the soil and destroys poisonous gases.

3rd. Promotes nitro-bacteriological action in the soil which is not only beneficial but is absolutely necessary to plant life.



# How Wide Should Our Roads Be?

By Jake Miles.

Driving over the country roads of Utah one is struck with what Col. Henry Watterson of Louisville Courier-Journal calls the "prodigal waste of land" in road construction. Along this line the "Country Gentleman" recently declared editorially: "Some day we shall learn in America the simple lesson learned long ago in older lands, that when a road is wide enough to carry the traffic it need not be any wider. Then we can economize on road maintenance and convert to the uses of agriculture many thousand of acres now ingloriously idle."

Here is a hint to the new counties of Utah, and in fact to the county commissioners and road builders generally of the state. Utah's system of requiring a four-rod country road is following the pattern of most of the eastern states, but these states are slowly coming to the conclusion that a 66-foot road is absolutely too wide for requirements.

It is argued that a farm wagon is a little less than five feet wide, and that on a 4-rod highway twelve wagons could stand side by side and not scrape a hub. Each mile of these roadways contains eight acres of valuable land. Much of it is capable of raising every year 60 bushels of wheat, 20 tons of sugar beets, or 100 bushels of oats to the acre. With a one-rod road there is a saving for agriculture purposes of six acres to the mile of Utah country highways; with a two-rod highway there is a saving of four acres to the mile, which might represent 240 bushels of wheat, 80 tons of sugar beets or 400 bushels of oats each year.

In England, Germany, France and other European countries thousands of miles of the best roads are only one rod wide. These permit three teams to pass. It is estimated that in Iowa alone 416,000 acres of its finest lands are worse than wasted by the 4 rod road, and in Kansas 393,200 acres made everlastingly idle. In Utah this wasted acreage amounts into tens of thousands of acres of the state's most valuable lands; lands now dedicated to the raising of weeds to pest the farmer. These broad acres should every year be yielding up hundreds of thousands of bushels of grains or other farm products. It is estimated that these double row ribbons of weeds which are found gracing, or,

better disgracing, practically every highway in the state, more than supply each season all the adjoining farms.

Relative to the matter of road building, the Courier-Journal of Aug. 16th says, and every word is applicable to Utah today.

It may be added that a well-maintained road a rod or a rod and a half wide, with trees along either side is much more agreeable to drive over than a road three or four rods wide which can never be shaded and must always be an intolerably hot sun reflector during summer. Left unoiled, it is glaring and trying to the eyes. Oiled, it gives off heat like a stove. It would cost much less to line every mile of public road with forest trees whose spreading branches would in time shade the entire road, than to make the macadam surface three or four rods wide. And forest trees entail only a small upkeep expense, increasing in beauty, dignity and usefulness by the mere lapse of time.

If long-distance travel by automobile is to be made a pleasure in summer for other than "scorchers" who do not mind being scorched, it must be made so by tree-lined highways. Trees may be planted at small expense. They should be included in construction contracts as a necessary part of roadmaking.

It is folly to neglect tree planting and to allow trees already standing to be mutilated by telephone companies or cut down by any owner of abutting property who chooses to attack them with the ax.

How grateful is every driver for the occasional stretch of shaded road! Yet where is there a well-organized propaganda in behalf of making the shaded road the rule instead of the rare exception?

## WHAT BILL DID.

Bill Turner was a farmer; he labored all his life. He didn't have no schoolin' and neither had his wife. But Bill was built for business and made the wheels go round, and left a healthy fortune when they put him under ground. He was always taking chances, paid a hundred for a bull. His neighbors called him crazy, but he left a stable full of cows that broke the record, making butter by the ton, an' Bill had his picture printed in the Squeedunk Weekly Sun. He had new-fangled notions of making farming pay. He even bought a fool machine to help him load his hay. The neighbors fairly snorted; said Bill would never make it work. It wasn't worth a ding! Bill didn't care a dang 'bout hay went in the barn an hour before a thunder storm came sailing out that way an' caught his neighbors in a pinch and spoiled their new mown hay. Bill's neighbors put their milk in cans, and set 'em in a tank. Bill skimmed his with a machine and turned it with a crank. Smith chops his firewood with an axe, Bill uses some gasoline and saws a hundred cords a day with another blame machine. Today Bill's wife rides in a car and dresses up in silk. Smith's wife rides in a wagon and kept on skimming milk.

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# How to Produce Cream That Makes Good Butter

Prof O. F. Hunziker and G. L. Ogle, Purdue Station.

The farmer holds the key to the quality of the butter manufactured and the price received for the same. The market price of butter is governed primarily by its quality. Good butter which brings top market prices can be made only from good cream, and the quality of the cream in turn is controlled by the care it receives on the farm.

Under present market conditions the quality of butter effects its price more than ever before, i. e., the difference in price between first grade butter and second grade butter is very great. This fact is due largely to the increase of imports of foreign butter, made possible by the reduced tariff. Most of this imported butter is of good quality. This influx of foreign butter will be vastly greater after the conclusion of the European war.

In order to successfully meet this competition with foreign butter and to preserve American markets for American butter, we must produce better butter, we must produce a butter equal in quality to that of the imported product.

## Stimulates Consumptive Demand.

Good butter is an essential asset of the dairy business under any condition. Each pound of good butter sold increases the consumptive demand of butter. Quality is the most effective advertising medium; in fact, it is an absolute necessity for the permanency of the business. The better the quality of butter, the greater its consumption; the more brisk and the more favorable the butter market, the larger the returns. Quality is also the only really effective means to successfully compete against butter substitutes.

The dairy farmer, the producer of milk and cream, controls the quality and price of butter. If he furnishes cream of good quality he makes possible the manufacture of good butter, which will command the highest price on the market. If he supplies cream of inferior quality, a low grade butter is bound to be made from it, which means small returns for the product.

The dairy farmer is the controlling power which determines the destiny of the dairy industry. The care he gives the cream on the farm, determines the financial returns from the butter; and in turn the returns from the butter determine the prosperity of the dairy farmer, because the price the creamery pays for butterfat is necessarily largely regulated by the price the butter brings on the market.

Lack of proper care of milk and cream on the farm and the resulting poor quality of cream, therefore, will augment and depression of the butter market, and stimulate the sale of foreign butter and butter substitutes, causing low prices to the creamery and small returns to the farmer. These unsatisfactory conditions can be overcome by proper attention to the quality of the cream on the farm.

Every farmer in the State can produce first grade cream by reasonable attention to the following simple and fundamental principles: Cleanliness of separator, promptness of cooling and frequency of delivery.

## Clean Separator.

The separator is the collector of



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many of the impurities contained in milk. If cream of good quality is to be secured, it is obvious that the separator must be cleaned thoroughly after each separation. If not washed and freed from all remnants of milk of the previous separation, the separator becomes a seat of contamination and a source of unclean and filthy cream, the disastrous consequence of which no subsequent treatment and care of the cream can overcome.

This does not mean that no attention should be paid to cleanliness and care of milk before separation. Milk produced under unsanitary conditions will not produce good cream, even if passed through a clean separator. In the production of good milk, clean stables, clean cows, clean milking and clean utensils are essential, but all these precautions come to naught, unless the milk is run through a clean separator; and experience has shown that it is this negligence in the care of the separator that has done more harm to the quality of the cream than any or all of the factors entering into the care of the milk before separation, combined.

Wash the separator after each separation.—Immediately after separation, flush the separator with water until the discharge from the skim milk spout is clear. This removes most of the remnants of milk and cream, and loosens the separator slime in the bowl, making subsequent washing easy. Now take the bowl apart and wash with hot water containing some good washing powder, all parts of the bowl, discharge spouts and buckets. Then rinse them with scalding hot water and allow all parts to drain in a clean place. All other milk utensils should receive the same treatment. Do this after each separation.

Other advantages of a clean separator.—Aside from insuring cream of good quality a clean separator will skim more closely and last longer than a separator that is not thoroughly washed after each separation.

The slime which accumulates in the bowl reduces the space in which the milk is exposed to the separating influence of the centrifugal force. The separating efficiency is therefore diminished and more fat is lost in the skim milk.

If the bowl is not washed after each separation, the impurities and acid formed in it, due to decomposition of the remnants of milk, tend to corrode the bowl and internal contrivances and to shorten the life of the separator.

#### Proper Cooling.

Cool the cream immediately after separation by setting the can in cold water.—The spoiling of cream as well as the decomposition and putrefaction of other food stuffs is caused by germ life, bacteria, yeast and molds. Like other living organisms, germs require warmth to thrive. In the absence of warmth they are inactive and are unable to continue their work of destruction.

When the cream comes from the separator it is warm and in ideal condition for bacterial decomposition and spoiling. If it is cooled promptly the activity of the bacteria is checked and the cream will keep sweet for a reasonable length of time. The lower the temperature to which it is cooled, the longer it will keep in normal condition. Cooling to the temperature of the water available on the average farm alone greatly retards bacterial action and prevents spoiling.

Cream should be cooled at once after it leaves the separator.

Prompt cooling is not possible by merely letting the can stand in the air. Air is a very poor conductor of heat. The cans must be set in water. Water cools cream about thirty times as fast as air.

Set the cream cans in a trough, tight box, tank or half barrel containing water. If running-water is available, let the water run through the tank continuously; if not, fill the tank up with fresh water at least once every twelve hours. If the cooling tank is connected with the stock watering trough, the water needed for the stock serves to cool the cream by running through the cooling tank first.

#### Do Not Mix Warm Cream With Cold.

Stir the cream frequently to hasten the cooling and to keep it in smooth condition. Do not pour warm cream into cold cream; this practice spoils the whole batch. Cool the warm cream in a separate can before mixing. The dairy supply houses are now putting on the market cooling tanks which provide for two cans for this very purpose. If you cannot conveniently make your own tank, or have it made locally, ask your creamery to secure a tank for you, or write to any reliable dairy supply house.

Aside from checking fermentation and therefore avoiding rapid spoiling of cream, the use of the cooling tank serves to take the animal heat out of the cream, preventing the cream and butter from developing an unpalatable smothered taste, which greatly depreciates the market value of butter.

When promptly cooled and frequently stirred, the cream remains in proper mechanical condition so that it can be readily transferred without excessive loss due to sticking to the can. This also makes possible the taking of representative samples therefrom, which in turn insures accurate tests. One of the fundamental causes of irregular and incorrect cream tests lies in the poor mechanical condition of the cream when sampled. It is difficult to take a correct sample from cream that has not been cooled promptly and properly, nor stirred frequently, or that is otherwise in poor condition.

Cream is a highly perishable product. Like other similar products it is best when fresh and should therefore be marketed as early as possible. Age will deteriorate cream under any condition. While proper care retards such deterioration, it cannot entirely prevent it, hence delivery should be made often, preferably three times per week in summer and twice per week in winter.

#### Proper Richness of Cream.

Adjust the cream screw of the separator so as to secure cream testing about 35 to 45 per cent. fat. Low-testing cream sours and spoils more rapidly than high-testing cream, so that by the time it reaches the creamery it is often unfit to be made into good butter. In the spoiled and curdy condition, it also makes difficult accurate sampling and testing. It is undesirable further, because it diminishes the amount of skim milk available for the feeding of calves and pigs; it increases the cost of transportation for every pound of butter fat shipped; it makes impracticable the use of a reasonable amount of starter in the creamery, and starter is essential for the production of the best quality of butter; it does not

(Continued on page fifteen)

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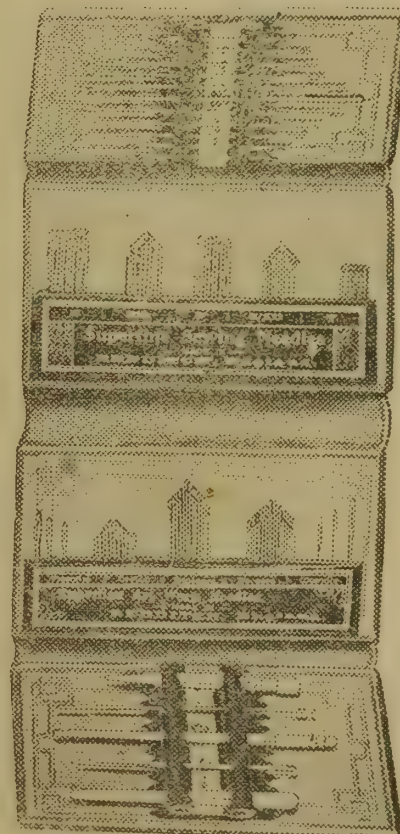
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## Official Testing

By Ben R. Eldredge.

Official testing of dairy cows is testing pure-bred cattle under authority and supervision of the Agricultural College. Such a test is recognized by the authorities of the various dairy cattle clubs as authentic. Registered cattle, whose product amounts to a certain quantity in seven days or a year, are admitted to a Register of Merit or advanced Registry. The requirement for this recognition vary with the different breeds of cattle and also the ages of the cows.

Many of our Utah breeders apparently do not appreciate the value of recognition their herds would receive through official testing. Only three of our Jersey and probably the same number of our Holstein herds have had representatives go into the Register of Merit under the supervision of our Agricultural College. Now, what is the advantage that these herds have over those that have not received similar recognition? It is this. In selling their young stock the owners of these herds can say that certain young animals are from dams that are in the Register of Merit. That means, that those dams have produced these figures are for Jerseys) if they were five years old when the test was made, at least 360 pounds of butter fat in a year; or, if the cow was four years old when the test was made, that she produced 323.5 pounds of butter fat; if she were three years old, 287 pounds and if two years old 250.5 pounds. These yields are far above average yields. It takes good cows to produce these amounts of butter fat in one year; so that when a breeder is able to say that a bull calf is from a dam who is in the Register of Merit he says not only that the calf's dam was an unusual producer but that an authentic record can be shown of just what she did produce when under test. This is far different than simply the statement of some man that a certain cow has produced a certain amount of milk. The best guide to the value of a young bull is the production of his dam for we generally consider that it is from his dam that the bull inherits those qualities which he will transmit to his daughters.

Now, let me cite an instance. I know of one breeder who is very enthusiastic over a certain record that he claims for a heifer that was in his herd. She was two years old, and when her calf was ten or twelve days old she produced in two milkings a fraction over 39 pounds of milk, and I heard him many times tell visitors of this and it was frequently mentioned by him on the State Fair Grounds. But let me tell you how that was done. She was milked very late one evening and the next morning milking was postponed until fourteen hours had elapsed since the evening milking. The evening milk weighed 19 pounds. The morning milk 20 pounds. I happened to be where I could observe the tally sheet in that barn for sometime after this result was obtained and at no time after that did I find any two milkings that would represent 24 hours product that would total over 29 pounds. It was the truth that that heifer did in twenty-four hours give 39 pounds of milk. But was it the honest truth? Had that tally sheet been studied it would have been found that the 24

hours preceding and the 24 hours following that in which the 39 pounds were given would have shown a total of only two-thirds or even less than two-thirds of 39 pounds. Now, in an official test, a man who thought he was responsible to the Agricultural College for his work would not permit such a record to go out without qualification. Such an irregularity would not be permitted in official test work, and it takes more than the product of one day to stamp a cow as a great cow.

I am anxious to see the time in this State when dairy bulls cannot be sold that do not show in their pedigree a record for more than ordinary production for dam. In the past it has been too common for a man who wanted a bull to purchase some calf just because the cow it was from happened to be registered. There are many registered cows that are pure-bred scrubs. It was for the elimination of these that the Register of Merit of the Jersey Cattle Club and the Advanced Registry of the Holstein breeders and similar requirements by Guernseys, Ayrshires and Brown Swiss breeders were adopted.

One thing that we often forget is that faults are often more readily transmitted than are the traits of merit in our cattle and all pure-breds are not free from faults. Some of them have faults that are serious indeed and the Register of Merit or Official Test is a weeding process for our pure breeds. There is no handicap on the Utah breeder. Those cattle that have entered the Register of Merit here have done so with good margins. There is no reason why we cannot produce cattle of more than usual merit in this great state of ours. We have climate, feed, water all in our favor; so far as the work of testing is concerned we have an Agricultural College that will gladly supervise the work, though there was one breeder who, when he was asked why he had not put his cattle under official test, answered that he could not get anyone to do the testing which was absolutely untrue, for he had never made any application for help of this kind in any way whatever. You Utah breeders are coming to the point where you must either put your cattle under official test or take your places way back at the rear of the profession.

Articles will follow soon on how to prepare for official testing.

### DISINFECT, IF NECESSARY TO VISIT HOG CHOLERA.

So far we have had but little hog cholera and it would be well to learn from others. While it is never wise to visit hog lots known to be infected with hog cholera unless necessary, the spread of disease thru this common means may be prevented by cleaning the shoes and then washing them with a good disinfectant. If a man drives his team and wagon through a lot where cholera has recently existed, he should disinfect the wagon wheels and horses' feet before returning to his own premises.

Half of greatness is grit. When intelligence is backed up by the determination not to back down, the only thing under the sun that is impossible is something that can't be imagined. —Herbert Kaufman.

## Questions and Answers

• Tremonton.

Utah Farmer:

I am operating a dry farm, have gown Turkey Red wheat for four years now, for seed have always used the largest and plumpest looking wheat produced on my own land. This year the kernels appear to be smaller and the heads are hardly so well filled, as that grown on the same farm though on new land planted last fall, plowed early the previous spring.

Some of my neighbors tell me my seed is "running out" that for this fall planting I should get new seed. I should like advice from some one who understands this proposition, as I had never before heard that it was possible for wheat or any other grain to "run out." Heretofore my grain has been of the very best, in fact some of my neighbors have come to me for wheat for their planting.

If you advise getting new seed where shall I get it? Is it possible for a farmer to raise his own seed from year to year? Any information you can give me will be appreciated.

Answered by F. S. Harris.

In answer to your question I might say that a long line of experiments conducted at a number of experiment stations has shown that it is not necessary to change seed grain. Instead of running out, grain gradually becomes better adapted to the region in which it is grown, and the yield should improve. Of course there will always be years when crops are not so good as during other years, but this condition exists no matter what seed is used.

The yield of potatoes may decrease through disease getting into the land and seed. In a case of this kind new land and new seed should both be used. Wheat that is not tested may also gradually be contaminated with smut, but if proper care is taken this can be overcome. Under the conditions mentioned by you where you have made careful selections, I should advise against changing seed, as yours is probably better adapted to your conditions than that from the outside.

### BLIGHTED LAND

Pleasant Grove, Utah.

Utah Farmer:

I have a two acre patch of sugar beets in which there is a space of about 5 square rods that has been blighted for the last three years. My neighbors suggested that I put chicken manure on this place, which I did, and the beets came up with a good stand, but when they grew to about the size of your thumb they wilted down, and did not amount to anything.

If you could advise me though your paper, the cause of this, and a way to overcome it, I would like to have you do so. Thanking you, I am

Yours truly,

L. S.

Answered by F. S. Harris.

Chicken manure is very high in soluble plant food and if applied in sol large quantities, it has the effect of "burning" the crops. It will gradually work out of the land, but its removal may be hastened by washing with irrigation water. Of course, it is possible that your trouble does not arise from the manure as it may be caused by some disease.



## Heavy Duty Engines Require a Special Oil.

—By The Oil Philosopher.

With the heavy duties imposed upon traction and other large internal combustion engines, comes the demand for a special oil.

It is just as important to keep the bearings of a rough looking traction engine in perfect condition as it is to keep the motor of the finest automobile in perfect running order. There is one way to do it and that is by the use of a lubricant especially adapted to the particular engine. We are manufacturing

## Vico Automobile Oil (Heavy)

for traction and large internal combustion engines—satisfying a long felt demand for a special lubricant.

With a velvety smoothness and high viscosity, especially refined to meet the requirements of heavy duty engines, Vico Automobile Oil (Heavy), insures perfect movement and increased power.

It improves compression, resists heat, reduces wear, burns clean and leaves no carbon deposits. Its exclusive use means real economy in operation and engine troubles reduced to a minimum.

If your dealer is out of stock, don't accept a substitute but communicate with the Utah Oil Refining Company, Salt Lake City, and you will be promptly supplied.

## Utah Oil Refining Co. Salt Lake City

### BARGAINS.

One 16-Horse Steam Tractor.  
One 20-Horse Gasoline Tractor.  
Have been used for short time, but are in first-class condition.  
Write for price and details.  
S. PETERSON & CO.,  
210 So. 6 West, Salt Lake City

### ANSWER

The advertisements in this issue either by asking your local dealer for them, if he does not carry them in stock he may send for them, or you can write direct for catalogue and information. Don't forget to mention the Utah Farmer for we are back of every advertisement that appears in our paper.



# School Lunches

By Miss Gertrude McCheyne.

The opening days of school makes us realize that one of the bugbears of the school year is with us again. A cold lunch is not the most appetizing mode of sustaining life, and when it is repeated each day is apt to become monotonous. It is too generally felt that anything and any way will do for a lunch, and lack of time is urged for the ill-prepared box or pail in which "things are neighbors that have never been neighbors before." We do not wonder that the afternoon sessions are conceded by most teachers to be the dulllest part of the day when we remember that a heavy lunch makes a dull student.

The first thing to be considered is the receptacle in which the lunch is to be packed. Old newspapers that have been handled and have lain around the house gathering dust are not sanitary. If a basket is used it should be well shaken each night and aired. A tin pail has the advantage of being light to carry and cheap in cost, but it lacks durability and rusts easily. Granite pails, the more expensive, costing a dollar and a dollar and a quarter, more than repay the first cost by their lasting qualities; they are easy to clean and if thoroughly scalded and aired after using the food will not have any stale taste.

Neatness in putting up a lunch and care in keeping the various articles of food separate are factors too often overlooked. This latter point is of especial importance in rendering the food palatable. Paraffin paper at twenty-four sheets for a dime, or even tissue paper at one cent a sheet, will keep bread, sandwiches and cake from becoming stale or impregnated with the taste of other foods in the lunch. The certainty that the box is not likely to maintain an upright position for any length of time makes it advisable to use jars with screw tops for all liquid and semi-liquid foods. A spoon, fork and paper napkin should be a never-failing accompaniment. The former in sets at 25 cents and the latter at fifty for 5 cents, are a cheap means of education in cleanliness and good manners.

The question of what shall the lunch box consist is answered by the needs it is called on to supply. To the child its chief function is to fill and aching in as small a space of time as possible. The wise mother knows, however, that the requirements of the growing child must be met under the abnormal condition of school without impairing the digestion. Every child has a sweet tooth. This is the natural cry of the body for heat-producing foods. Plain cookies, small cakes, cup puddings and clean homemade candies minister to this need in a harmless way. Pies and rich cakes should for the most part be left out; they are too heavy a diet where the greater part of the day is spent under the nervous strain of trying to sit still in a room that in most cases falls short of a long way of its rightful quantity of fresh air. Bread should be a part of the fare, but it need not be always in the form of white bread. Graham, oatmeal, brown and nut bread make a pleasing variety. Rice, easy to prepare, inexpensive and very nutritious, may be used in combination with meat or as a pudding.

The very word lunch box is sug-

gestive of sandwiches and the fillings of these are the means by which foods that assist in the growth of the body can be introduced. These foods, among which may be named meat, cheese, hard boiled eggs, dried fruits and nuts, are easier both to handle and to digest if finely ground in the food chopper. There may be a question as to the wisdom of putting cheese in a child's lunch box. If it is cooked in combination with other things no ill effects will be felt from its moderate use. Its poor reputation is the result of abuse rather than use.

Some children who do not eat much solid food need additional nourishment in liquid form. Milk, butter-milk, cocoa, rice water or eggnog are easily available. Cocoa should be well cooked to remove the raw taste, water in which rice has been boiled, thinned with fruit juice and sweetened, is nutritious and economical. Fruit juices of all kinds are valuable, especially in the spring. Care should be taken at that season to use fresh fruits, salad greens, using less meat, cheese and the heavier and heat producing foods.

The following are some easy modes of preparing foods in common use on the farm, to be combined as may be convenient and suitable. The recipes for most of these dishes may be found in any cook book, while those that are marked with a star are the result of individual experiment and are given in full:

## Eggs.

Plain custards, variously flavored, baked in cups.  
Caramel custards.  
Escalloped eggs.  
Stuffed eggs.

## Vegetables.

Any left over vegetables may be seasoned and put in a cup or glass.  
\*Rice pattie.  
Cold corn, to which custard mixture has been added and baked.  
Cold sweet potatoes, seasoned, rolled and fried.  
\*Onions, stuffed.  
Tomatoes, stewed, stuffed, baked, fried.  
Fresh tomatoes.

## Sandwiches.

Cut bread a day old; soften butter before spreading.

## Fillings.

Meats—Pork, ham, bacon, chicken or any left over. Put through chopper, season. Catsup, salad dressing or cream may be added.

\*Canned salmon, potted.  
Cottage cheese, with or without ground nuts.

Peanuts or common walnuts finely ground, moistened with cream.

Nuts and figs, dates or raisins ground together.

Raisins stewed with sugar and small amount of water till thick.

\*Date paste.

Cheese—Put through grinder; season.

## Puddings

Cheese pudding; also called cheese fondue.

Boiled rice, baked with cheese.

Macaroni with cheese or cheese and tomatoes.

Macaroni with cheese and hard boiled eggs.

\*Rice mold, flavored.

Rice, tapioca or sago with fruit.

Rice, tapioca and sago with custard.

India meal pudding.

Chocolate bread pudding.

## Cookies.

Plain sugar cookies.

Peanut.

Cocoanut.

Hermits.

Molasses.

Spice.

Oatmeal.

\*Cinnamon cakes.

\*Date cookies.

\*Gingerbread.

## Bread.

\*Nut bread.

\*Oatmeal mush bread.

\*Moravian bread.

## Raised Rolls.

Rusks—Especially good.

Cinnamon rolls.

Scones.

Coffee bread.

## Fruit.

Fresh fruit should be used whenever available.

## INDIVIDUAL RECIPES.

### Stuffed Onions.

Parboil large onions.

Take out centers.

Add to onion that has been removed.

Equal quantity of bread crumbs.

Equal quantity of cold meat (ground).

Cream or melted butter to moisten.

Return mixture to onion shells.

Place in greased pan.

Bake in moderate oven one hour.

### Potted Salmon.

One cup salmon, mashed.

1 tablespoonful butter.

Seasoning: Salt, mace, melt butter, put in salmon, heat thoroughly, press in jar.

### Rice Mold

1 cup rice, well washed.

1 cups milk

Put in double boiler and let cook till rice has taken up milk. When rice is half cooked season with: Lemon rind, to be removed before molding, or almond or vanilla flavoring.

Turn into mold and chill.

### Cinnamon Cakes.

½ cup butter.

1 cup sugar.

2 eggs.

½ cup milk.

1¼ cups flour.

2½ teaspoonsfuls baking powder.

1 tablespoonful cinnamon.

Bake in individual pans or gem tins.

### Rice Pattie

Line dish with boiled rice. Fill center with:

Meat, ground.

Cold vegetables, if desired.

Tomatoe juice to moisten.

One beaten egg.

Season, cover with layer of rice, steam one hour.

### Date Paste.

1 pound dates, stoned.

1 cup brown sugar.

½ cup water.

Put in double boiler and cook till smooth paste. Cool before using.

## Date Cookies

1 cup sugar.

½ cup butter; cream together.

1 cup hot water.

1 teaspoonful soda put soda in water.

2½ cups rolled oats.

2½ cups white flour.

Add flour and oats alternately to sugar and butter, moistening with liquid. Roll out small quantity at a time. Spread with date paste. Cover with other half of dough. Cut in small squares. Bake in moderate oven.

## Ginger Cake

1 cup sorghum molasses.

3 eggs beaten in a cup and filled with sour milk.

½ teaspoonful soda; add to molasses.

1 tablespoonful ginger.

Pinch salt.

Flour to make a stiff batter.

## Shoes Repaired by Parcel Post

### BIG SAVING IN SHOE BILLS.

Shoes are repaired same day as received and returned by C. O. D. Parcel Post, and delivered to your door. It is just like having a modern, well equipped shoe shop on the place.

We own and operate SEVEN shops, employing more than 39 people. We are the largest shoe repairing company in the West and guarantee to please every customer.

Price list: Mens half soles 75c, ladies half soles 50c, heels straightened 25c, rubber heels 40c and 50c. Patch 10c and up.

It will save the 10c. C. O. D. charge by sending repair charge and postage with order.

### Royal Shoe Repairing Co., Inc.

28 So. Main St., Salt Lake City, Utah.

2473 Washington Ave. Ogden, Utah

7 Main St. Logan, Utah.

8 Carr Fork, Bingham Canyon, Utah.

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PAULINE MARRIOTT

Who won State and Intermountain championship on typewriter.

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### HENAGER'S BUSINESS COLLEGE

HENAGER COLLEGE BUILDING

SALT LAKE CITY, UTAH.

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Entered as second-class matter in the Postoffice at Lehi, Utah.

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Subscription Price \$1.00 per year

#### OFFICES:

612 McIntyre Building, Salt Lake City  
James M. Kirkham, Manager  
Kirkham Building, Lehi, Utah

#### ADVERTISEMENTS.

We believe that every advertisement in this paper is backed by a responsible person. We guarantee the reliability of advertisers, but we will not undertake to adjust trifling differences between subscribers and advertisers. This guarantee holds only when written complaint is made to the publisher within one week from the date of any unsatisfactory transaction, accompanied by proofs of swindle and loss and within one month of the date of the appearance of the alleged deceptive advertisement in the Utah Farmer, and the subscriber must prove that in writing to the advertiser he said: "I saw your advertisement in the Utah Farmer."

#### OFFICIAL ORGAN

Utah Horticultural Society, Utah State Dairymen's Association, Utah State Bee Keepers' Association, Bear River Valley Farmers' Protective and Commercial Association, Agricultural College Extension Department and Utah State Fair Association, Utah-Idaho Millers' and Grain Dealers' Association.

When you ask for a change of address always give OLD and new postoffice address.

What would the world do without women? Think it over.

Unless you have horse sense, you should not try to run an auto.

Some people buy so many things they do not need and remain poor because of doing it.

Be fair to the wife and provide for her as good equipment in the home or kitchen as you have for the farm.

What kind of a repair shop have you on your farm? Could you repair the ordinary break with out spending time and trouble of going away to have it done?

Are you getting something ready for the county fairs? Your home market is alright. Don't get the idea that your local market isn't worth cultivating. If the home folks don't appreciate your products, outsiders are not very likely to. Your home market will show you what can be done away from home.

Do a little thinking, if you want to succeed at the farming business. Some say they are too busy to think, well—he is pretty sure to come up standing. Some body will do the thinking for you but it will not be in your favor. No thinking, no good work, no definite plans.

It is a good time right now to go over the fence corners and the unused yards with a sythe, and cut down all the weeds that have been growing there during the summer. It will reduce the weed crop for next year. If these weeds have gone to seed, and are ripe let them dry and then burn them. It will make the place look better.

#### USE MORE PAINT.

You have no doubt been impressed with the wonderful change in appearance that a little paint will make on a home or barn.

Nothing will increase the value of your farm more than to have well painted farm buildings, farm fences and farm machinery. Nothing adds more to the appearance of any farmstead than the use of plenty of good paint. Aside from this, however, the saving from the use of paint can hardly be estimated. Well painted wooden buildings in the eastern states are known to be all the way from 25 to 50 years old. Out in this part of the country where paint is not so generally used, can you point to any buildings that have lasted that long? Paint is not expensive. You can buy good paint already mixed or you can buy the materials and mix it yourself. You can apply it at odd times so that the cost is comparatively small. A thrifty community is always indicated by the fact that plenty of paint is used. A run down community is known by the lack of paint.

#### WHAT'S IN A NAME?

There is much in names. Think of the value that has been given to some names because of the advertising they have received. Your name means much to you, just so, will the name of your farm become if well named and properly advertised by the sale of high quality products. The name of a farm should be a source of pride to the farm owner. It is a convenience for postmen on rural routes. The name should attract passersby and advertise your farm. The farm name on bushel crates, boxes and other packages often seems more appropriate than the owner's name.

If only the best quality of products leave your farm, what an excellent basis for future business if all this is known by the name of the farm.

One farmer is starting a system whereby he is adding the name of the farm to that of each pure bred calf born to his herd.

For these and many other reasons, much care should be given to the selecting of a suitable name. It should be made descriptive of the site or location. Expressing a statement of the owner's ideal, or it may carry some family association. Anyone who

names his farm indicates that he has some pride in his possession, and the inference is that he has something of which to be proud.

#### WASTE OF FARM EQUIPMENT.

This is an age of machinery and much farm equipment. We believe that every farm should have all the machinery they can properly use. Many farmers however are losing money because of the way they take care or do not take care of their tools and machinery. Expensive equipment is left in the field where last used unprotected from the sun or rain. This kind of treatment will do the machine more harm than all careful use it is given.

In visiting a farm the other day I saw within a few rods of the barn a number of tools and machines that were being badly treated by the sun, wind, rain and loose animals, these should have been put in the barn. An hour's time would have put them all away. This same man was a hard worker but he did not seem to value the machinery and tools he had laying around his farm.

Put your machinery away at the time you finish using it. Have a place for your tools and always return them when work is completed.

#### GOOD AND POOR FARMING.

In almost any neighborhood where farming is practiced, one can see the very striking difference between good and poor farming. Fields adjoining, only a fence to separate them, show the difference. You will nearly always observe that one is clean cultivated while the other is full of weeds. One shows signs of a full harvest the other a half crop, the difference is simply success and partial failure. Soil and climatic condition have been exactly the same. The difference is in ones foresight and his own efforts.

First of all he used only good seed; second, he prepared the very best seed bed possible; third, he has cultivated his crops when ever it was necessary. He has shown an interest in his crops, watching their growth and caring for them. The test of any farmer comes when he has to meet adverse condition, unusually dry seasons, excessive moisture, pests or other things that interfere with the natural growth under favorable conditions.

If a mistake has been made the good farmer, goes about trying to find some way to overcome it the next season. He is not afraid to acknowledge what has happened and he will discuss the problems with neighboring farmers in order to learn how to succeed the coming year.

One must love his work and make a thorough study of it, if he wants to succeed.

#### MUCH DAMAGE BY FIRE.

We again emphasize the importance of being careful about fires. During the past week our attention has been called to the many small fires, and it is fortunate in most cases that serious damage did not occur.

Fire often occurs from a match carelessly thrown away, from ungarded Fire often occurs from a match carelessly thought to have been put out. Burning brush or cheat grass often gets beyond control and does much damage. The dry hot spell has made it easy for fires to start and burn more rapidly, and they are harder to control. More care should be exercised in preventing or allowing fires to start. Grain fields have been burned, a total loss and often from some ones carelessness.

Train the children in preventive work. Show them the seriousness of playing with matches. How a fire will spread by fences barns, dry leaves, grass and straw on the farms.

Do not kindle fires with kerosene.

Use only safety matches and always be careful to throw them where they can do no harm.

Do not throw matches on dry leaves, grass, papers or anything that can start a fire.

#### THE COUNTRY PAPER.

One of the greatest factors for good in any community is the local newspaper. One of the farmer's best friends should be the editor of the home paper. The local paper helps to make living worth while and what would we do with out it? We are always asking some favors of the local editor, but what do we give him in return? The small amount of \$1.00 to \$2.00 for a year's subscription. If he fails to give us proper recognition or for the very slightest reason we stop the paper. We kick at him because he fails to do this and we expect him to do many things we will not do ourselves.

How many farmers ever advertise in the local paper when they have something to sell? Farming is the greatest business in the world, but a single maker of chewing gum spends more money in advertising than all the farmers combined. If advertising will help this kind of business, why cannot we use it to help farming?

One way to advertise your farm is by nicely printed stationary. Choose a name for your farm, then have some letter heads and envelopes printed at the local newspaper plant and use it in all your correspondence. It will advertise your farm and your town.

Support the local paper by subscribing for it and give the man who is running it a kind word for the good he is doing. It will help encourage him for most country papers need your moral and financial support.



## POULTRY

### GREEN FOOD FOR POULTRY

Green food in some form is absolutely necessary to poultry for the best growth and production. The first green food should be given soon after the chicks are put in the brooder. Continued feedings of green feeds will aid growth, increase production and decrease the cost of grain. The first green food for the little chicks may consist of mangels, potatoes or other vegetables cut up fine at first until the chicks learn to like them, and later stuck on nails driven in the walls just high enough for the chicks to reach. Lawn clippings or lettuce may be fed with good results. Free range gives the best green food supply for the growing chick but that is not always possible. A small yard may be greatly improved by dividing it in the middle and sowing each half alternately the oats. Some poultrymen scatter the oats very thickly. Spade them in and allow the chicks to scratch them out as they begin to swell and sprout. A few boards laid on the surface will allow the oats to get a start. When the boards are removed, the chicks will have the time of their lives and are not satisfied until roots and all are consumed.

Where it is too dry or for other reasons impossible to get a good growth of green food in the yards, it should be supplied from outside. Dwarf Essex rape and Swiss chard may be produced abundantly with little labor and make excellent summer green food. Rape may be sown either in drill or broadcast as early as the ground can be worked in the spring and will be ready to cut in about six or eight weeks. It is apt to be somewhat affected by hot, dry weather and will not last the entire season. Swiss chard should be planted in drills after the soil becomes thoroughly warm. It will be ready for cutting in eight or ten weeks. The chard stands drouth well and will last until late in the fall. Either rape or chard must be cut above the central leaf bud if continued cuttings are desired.

Where hens are not accustomed to green food in this form, some little difficulty may be experienced in teaching them to eat it. This, however, may be overcome by starting with small feeds each day. During the hot weather, green food should be given early in the morning preferably while the dew is still on.

The winter supply of green food should also be kept in mind. Every poultry plant should have a plot of mangels large enough to carry the winter stock through the winter and start the chicks in the spring. Mangels require a well prepared seed bed and good cultivation for the best results. After the mangels are well matured, the leaves may be broken off and used at once while the roots are stored for winter. The great advantage in growing mangels is the fact that they keep well in any reasonable storage and are easy to feed.

A crop of late cabbage may be grown to advantage after some other crop has been removed. The immature heads may be used for fall feeding and the best stored for winter. Although cabbages make a very good green food they are not as popular with the poultrymen as mangels on account of the difficulty in storing.

Clover and alfalfa may always be fed to advantage either dry or green. Beet pulp has also proved to be very valuable where fresh green food cannot be obtained.—R. E. Jones, Connecticut A. C.

### WHY WISE FARMERS ARE ON THE DAIRY COW'S "PAY ROLL"

By Myron Townsend.

Consider the dairy cow as a wealth producer! Her other name is "ready cash"! From her such sources of revenue as butter-fat and skim-milk flow.

Who but the cow is the originator of the "cream check"! Animated machine though she be, the consumer of his silage and his roughage, isn't she the one friend of the farmer that fattens his bank account twelve months in the year? Nor is this all! She is the mother of the calves and the sole author of the sustenance from which they are fed the first months of their lives. Few cow owners appreciate how valuable her warm, sweet skimmilk is for the young stock of the farm!

And the yellow butter-fat! What is it but so much gold! Even after the Separator extracts the butter-fat from the whole milk all the bone and muscle forming elements are left. How warm, sweet separator skimmilk makes the calves, the pigs, the chickens grow! And it comes from the cow!

For every dollar's worth of fodder fed her she returns 100 per cent in dividends. Instead of robbing the soil of its fertility by selling off your produce feed it to the cow!

Then the solid and liquid wastes from her body! Do they not keep up the fertility of the soil? In converting hay and grain and grass and silage into milk and money isn't the manure her most valuable by-product? What a boon the dairy cow is to the impoverished soils of "run-down" farms that lack many of the elements that make plant life flourish.

Who ever heard of an "abandoned dairy farm" where a Separator was on duty removing the butter-fat, after which the warm, sweet skim-milk was fed to the calves or the pigs?

But there is still another source of revenue from the dairy cow. Even her old, worn-out body, about to succumb to wear and tear, has its market value! Her carcass can be sold to the butcher and her hide to the tanner!

Farmers are deeply indebted to the dairy cow! They are on her "pay roll"! She furnishes them a steady cash income in fat months and in lean and she makes their fields more fertile and productive.

Blessed be the cow! How could the world live without her? What a blessing she is to babies and how indispensable she is to adults! Consumers of dairy products—men, women and children everywhere—echo the sentiment: blessed be the cow! All people pay homage to the source of their sustenance, to their humble servant, the uncomplaining cow! Benefactor of all mankind!

And how much the cow contributes to the wealth of the community! Her very presence makes the mother earth more productive. She not only tends to elevate and enrich her owner but

**Grades Roads Levels Land**



**Sold on 10 days' trial.**

Money-back guarantee.

**Thousands in use.**

Nothing to break or get out of fix. Weighs 300 lbs. Does all, and more than the big machines. Pays for itself in a few hours' use. Write for catalog and special introductory proposition.

**MENSHOOR DITCHER & GRADER CO., Incorporated, Box 856, Denver, Colorado**

# Ditching

## Made Easy

With the Martin Ditcher and Grader

Cuts V-shaped ditch up to 4 ft. deep. Fine for levee work, terracing, cleaning out laterals and bed furrowing.

**Simple—Practical**



she furnishes food for his family and he sells the surplus to his neighbors. Cash circulates more freely and merchants feel the stimulus of such a steady flow of milk-money! No cream check, no cow!

Few men who form partnerships with the cow ever complain of hard times! If they treat her kindly and develop her milk producing possibilities intelligently they never consort with the chronic calamity howlers who outrage nature by bankrupting their soil with grain crops and then blame failure on the political party in power!

Pages and pages could be written in praise of the dairy cow! But "So, Bossy" needs no lengthy eulogium.

Her name is so linked with prosperity in the minds of farmers, bankers and merchants that her achievements, alone, entitle her to first place in the hearts of those who follow agricultural pursuits for their livelihood.

### YOUR EFFICIENCY.

Mary Johnson, Utah County.

The result of your work will be the test of your efficiency. Whether you are farmer or mechanic the same rules apply very largely. The results obtained from your farm is the results of your efforts. How can you improve—learn the weak points and overcome them. That part of your work which you like best and is best adapted to your farm condition should be emphasized. Don't be satisfied with a half-way proposition. I am going to give you twenty-five question suggested by E. E. Purinton and want you to answer every one to your own satisfaction. Of course you will be honest with yourself. Mark down the percentage after every question. If you have someone you can discuss these questions very frankly with for your own good, do that also.

The sumtotals of the credits divided by 25 will give your average estimated efficiency.

If you're not satisfied with the average, the credits will indicate where thought and effort can be applied to raise it.

#### Per Cent

1. Is your work agreeable?
2. Are you doing it in the best, and quickest way
3. Have you found where your greatest power lies?
4. Have you a definite aim in the line of this power?
5. Are you positive of your own future success?
6. Can you look on the bright side, always?
7. Do you know how to get well and keep so?
8. Do you know what habits and emotions hurt your work?
9. Are you correcting your weaknesses?
10. Have you taken stock of your

## Registered BULLS

## Short Horn and Herefords

If you want one or a carload, phone, telegraph or write at once

**E. W. Patrick**  
Marion Hotel  
Ogden, Utah

strong and weak points of mind and character?

11. Do you know what food, exercise and baths are most beneficial?
12. Are deep breathing and an erect body habitual?
13. Is your sleep long and refreshing and room well ventilated?
14. Are your meals regular and eaten slowly?
15. Do you wear loose, comfortable clothing?
16. Are you positive and courageous?
17. Are you tactful and courteous?
18. Do you get the cooperation of fellow workers?
19. Do you plan your work?
20. Do you save money systematically?
21. Do you like good reading and good music?
22. Have you ambition to be of real service to Humanity?
23. Do you seek good advice and helpful associates?
24. Is your leisure spent profitably?
25. Are your relaxations pleasant and helpful?



# Corn Is a Great Crop

In Utah a few years ago we used to raise a great deal more corn than we do now. This may not be true however in some communities. The corn crop of the United States is increasing, the immense crop of two billion seven hundred million bushels this year is wonderful.

Corn is king of all the crops. Over twenty per cent of all the improved farm land in the United States is annually devoted to the growing of corn. In the year 1914, 105,000,000 acres were planted to corn in this country, producing something like 2,700,000,000 bushels, which brought the growers \$1,900,000,000. For nearly fifty years the land planted to corn has been equal to if not greater than the acreage of all the other cereal crops combined.

Corn is the universal crop. In 1914 the world's crop of this cereal amount-

feat of the age. The attention of the world has been attracted by its greatness, yet every year the farmers are growing a one and three-fourths billion dollar crop, and we hardly give it a second thought.

The feeding of the corn crop is another important matter. There are about 100,000,000 people, and over 200,000,000 farm animals in the United States, including cattle, horses, mules, sheep and swine, that eat corn in some form every day in the year. Corn furnishes a great variety of feed and food for man and animal. Take away wheat, barley, rice and oats, and corn will completely substitute them all, supplying our needs with meal hominy, syrup, starch, corn sugar, oil, alcohol, and one hundred and fifty other preparations.

A great deal of interest has been taken the last few years in the im-

provement of the corn crop, together with improved methods of cultivation and the organization of boys' corn clubs, etc."

"By intelligent selection and breeding, corn has been improved in the past few years far beyond our greatest expectations. Corn is yet in the plastic stage of its development, and for that reason it adapts itself readily to new conditions, responds quickly to good treatment, and gives better returns for the efforts put into it than any other crop that grows.

"Upon the great fundamental law that 'like produces like,' rests all human progress. That 'poor seed' means a 'poor crop' no one will question; but it is not so fully recognized that unless great pains be taken to plant only the best seed, the crop will gradually deteriorate, or 'run out,' as we often say.

"Corn has been taught, talked, preached, printed, painted, demonstrated and advertised in every agricultural country of the world. Thou-

sumption of homegrown corn, together with improved methods of cultivation and the organization of boys' corn clubs, etc."

## NO MONEY FOR POETRY.

"You see," said the country editor, "I have printed your poem."

"Thank you," responded the poet. "I suppose I shall receive remuneration according to your usual tariff."

"Tariff. My good man, poetry is on the free list."

## "Utah-Idaho" the Standard of Sugar Perfection

There is no question about it; we are positive it is in the lead of high quality sugars, for sweetness, whiteness and fineness of granulation.

How do we know? By analysis; by the splendid results obtained wherever sugar can be used; by the constantly increasing demand for it. Do you wish more reasons? We can give them:

Try Utah-Idaho Sugar once and you will find a score of favorable reasons why you should use it. Many more than you expected. Your grocer has a sack ready for you. Be satisfied with no other than—



Fall Rye

and

Turkey Red  
Seed Wheat

LOWEST PRICES

Vogeler Seed Company

SALT LAKE CITY, UTAH.

The Brigham Young  
University at Provo, Utah

Will begin its Fortieth Academic year,  
September 23, 1915.

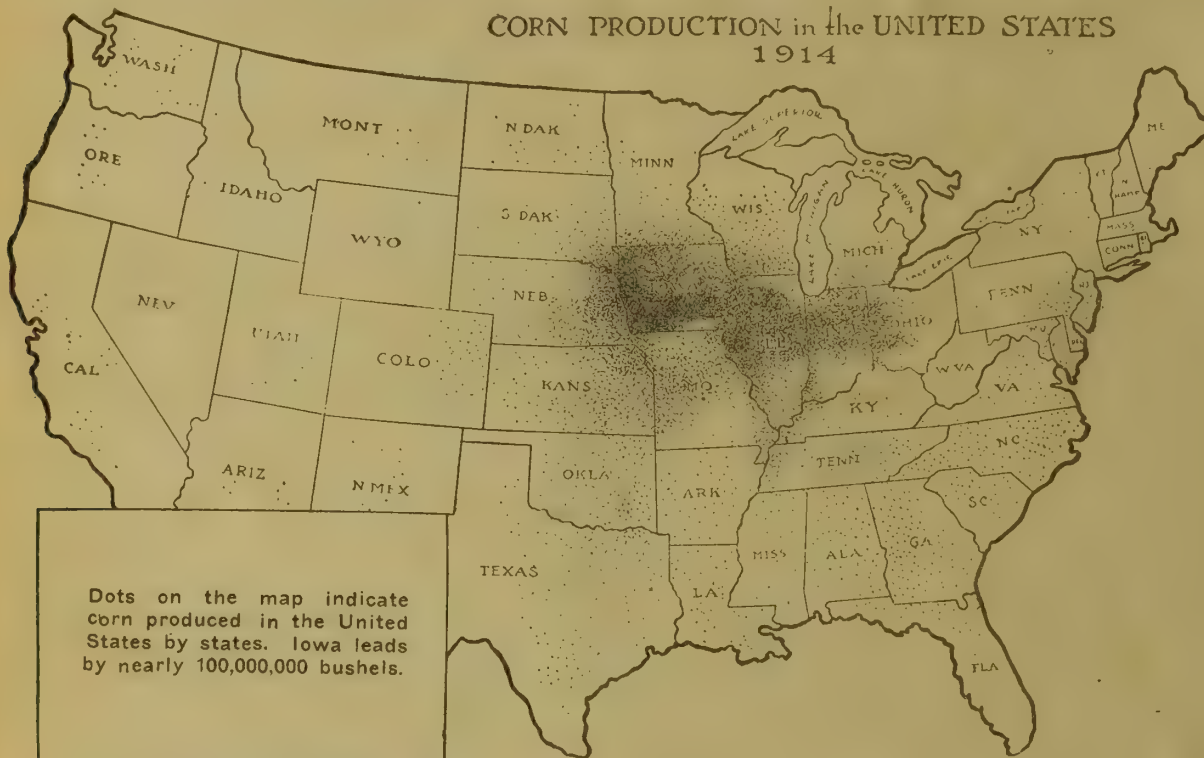
Registration days, Thursday and Friday,  
September 23 and 24.

CLASS WORK BEGIN MONDAY,  
SEPTEMBER 27.

WRITE FOR CATALOGUE.

All inquires will receive prompt attention.

CORN PRODUCTION in the UNITED STATES  
1914



ed to more than 3,500,000,000 bushels, grown on 170,000,000 acres of land. The United States produced two-thirds of this tremendous crop. In 1866, forty-nine years ago, corn brought the American farmers \$411,000,000, and for forty-nine years since that time, corn has steadily increased in acreage and value, never once falling below the figures given.

Corn is grown in nearly every section of the United States. The greater part of crop however is grown in the central states as shown by the map.

The annual corn crop exceeds cotton by nearly a billion dollars. In 1913 the cotton crop of the United States brought in a total of \$800,000,000; the hay crop, \$797,000,000; the wheat crop \$610,000,000; the oats crop, \$440,000,000. Iowa and Illinois each put in about 10,000,000 acres annually to corn, each producing from 300,000,000 to 400,000,000 bushels.

Although we produce such a great crop of corn we imported in 1912 5 million bushels from Argentine Republic South America. The Panama canal cost approximately \$300,000,000, and is the greatest engineering

provement of our corn. Some men are devoting their entire time to the breeding and improving of the corn crop. We quote from a recent article of Prof. Holden on this subject.

"For centuries our domestic plants have been bred for certain purposes, and as a consequence certain parts of the plant are abnormally developed. The selection, in the case of corn, has been to secure more grain, not a greater per cent of stalk. The result is that an ear of corn weighs as much as the stalk under ordinary conditions. When a highly bred plant is subjected to unfavorable or even to normal conditions, the first thing to suffer is that quality which has been most abnormally developed. In the case of corn, if the care is poor, we may obtain two-thirds of a crop of stalks, but less than one-half possibly but one-third of a crop of grain.

"Corn requires much greater care to prevent deterioration than most other crops, since it is a comparatively new crop, as we know it today, and its characteristics have not been so thoroughly fixed through centuries of breeding, as have those of many of the grains, but for the same reason it

sands are teaching it today. Hundreds of corn demonstration trains have penetrated every section of the country in the past fifteen years. There are corn demonstration farms everywhere. Thousands of corn clubs have been organized, and are now at work. There are corn shows, corn picnics, corn growing contests, and corn schools; but still, with all of the work done by our educational institutions, bankers, manufacturers and farmers, for the improvement of corn, the average per acre yield in the United States is less than twenty-six bushels—not half a crop.

"Poor seed is the greatest cause of the poor yield of corn. Just one small eight-ounce ear of corn added to each hill will raise the average of the United States to fifty-two bushels per acre, double the yield and value of the crop, and add about \$1,700,000,000 to its total value.

"The most important needs for a greater yield and a better quality of the corn grown are:

"First—Better care of the seed and more careful testing before planting.

"Second—The institution of campaigns of education for the home con-



## Prepare For The Fairs

Willard Johnson, San Pete County.

If you wish to succeed as a winner at one of the County Fairs or at the State Fair, now is the time to prepare. It is very important to know how to prepare an exhibit. Only the best of everything should be put on exhibition.

Every exhibit made at a fair should be of an educational value to the grower as well as to the public. The idea that large size is the only feature to be looked for in the specimen should be eliminated. As a rule, the idea seems to prevail that the largest potato, the largest apple or the largest pumpkin should be awarded the blue ribbon and frequently the judges themselves in awarding premiums seem to follow this idea. In many cases this is a mistake, as large size is not the most important feature. The commercial size of the specimen is the one that should be most encouraged. The size and quality that the market demands and the typical characteristics of the variety are the features that the grower should keep before him in preparing an exhibit. Exhibits, when properly made and judged, are of great educational value to the public and exhibitor.

To avoid any trouble in the judging of exhibits a score card should be available for every exhibitor so that he can study it before sending any exhibits. This score card should be the same one that will be used by the judges.

The exhibitor, in preparing a fruit or vegetable exhibit, should judge every specimen before it leaves his plantation. To do this to the best advantage the exhibitor should get hold of a premium list and follow out the instructions and become familiar with the score cards that are given in the premium list for the judges to follow in awarding the premiums. If the grower were a little more careful in selecting and in judging the specimens that are sent to the fairs there would be less disappointments after the awards are made.

Particular attention is called to the rules given in the premium lists regarding the proper packing of fruit in standard fruit boxes. Here's where most of the fruit exhibitors make the greatest mistake. Fruit growers who compete at the different fairs should take particular care and interest in preparing the fruit for exhibition purposes.

The thing to do is start now. Do not wait until a few days before the fairs begin and then expect the same results as if you had taken the proper time and care in selecting and preparing your exhibits. The greatest reward will come to you for the work you do in preparing and exhibiting the best products of your farm.

### LAPSUS LINGUAE

"I shall be awfully stupid now," exclaimed a wife who had returned from a visit to her dentist.

"Why so, my dear?" queried her husband.

"Because I have all my wisdom teeth pulled out," replied the lady.

"Oh, my love, the idea that wisdom teeth have anything to do with wisdom is a foolish one! If you were to have every tooth in your head drawn it couldn't make you any stupider, you know!"

Curtain!

### POTATO BREEDING.

Potato breeding may be said to involve the raising of seedlings from hand-pollinated or self-fertilized seeds. It becomes intelligent breeding only when it deals with seedlings produced from hand cross-pollinated flowers protected from insects and borne on plants possessing certain characteristics which is seems desirable to combine in the resultant progeny. In other words, intelligent plant breeding requires the same careful consideration of the parent plants that is given to the selection of the male and female by the progressive up-to-date animal breeder. Selection plays a very important role in this kind of breeding.

Since 1910 more than 60,000 potato seedlings have been grown by the Department of Agriculture at its Arlington farm. Out of some 28,000 seedlings grown in 1910, nearly 19,000 developed tubers; most of the remaining 9,000 either failed to grow after being transferred from the greenhouse to the open ground or else they failed to produce tubers. All of those which developed tubers were saved and grown in 1911. At harvest time all were again saved for further study and description. This entailed a large amount of work and the recording of many data, but the object is taking so many data and in growing a large number of seedlings which would ordinarily be discarded was to note whether any change occurred in the seedling in the second and subsequent generations. In other words, it was thought desirable to determine whether one might safely discard all unpromising looking seedlings the first season. The results secured indicate that there is little likelihood that a first-year seedling producing pronged, irregular shaped tubers will ever develop into a smooth-tubered variety. It is also equally apparent that a deep red or blue skinned seedling is never likely to become a desirable commercial variety. On the other hand, the experimenter is not always justified in discarding a seedling which has produced only two or three small tubers, weighing in the aggregate possibly not over 1 ounce, provided the tubers are smooth, shapely, and white skinned. Occasionally a seedling is found that is unusually prolific in both tubers and seed balls. The data secured by the Department have served to make it possible to discard first-year seedlings rather freely, with a fair degree of reliance, it is believed, both with respect to those discarded and those retained.

### STRAW A DISEASE SPREADER

A thorough cleaning up and disinfecting of the hog houses and barns, as well as the yards and pens, is not all that is necessary in the work of cleaning up to prevent hog cholera.

A well known veterinarian,\* one giving hog cholera control work a particular study, says: "A fertile source of infection often overlooked in the disinfecting process is the strawstack in the pasture. This should be distributed on the land, together with the manure, and plowed under before birds and other carriers have opportunity to carry the infection to other herds. Air and sunlight will usually be sufficient to disinfect open fields and paddocks."

The man who leaves the old straw pile in the lot or pasture is doing two things detrimental to his own interest. As above stated, it is a harbor for hog cholera germs, and in ad-

dition to that the man who doesn't get it spread over the land is robbing himself of the benefits to be derived in building up his soil by getting the straw promptly back on the land.

The old custom was to let the straw pile rot down and then haul out the manure. It was a slow and expensive job to haul out and spread the straw with a fork, but now since successful straw spreaders are obtainable the job can be quickly and cheaply done.

Hog cholera has robbed the farmer of thousands of dollars; loss of fertility in the soil has added its share to reduce the income. The prompt return of the straw to the land will help the loss in the latter case and may prevent a serious loss in the former.

Every time a man sows wild oats he gets a lot of innocent people to help him harvest the crop.



## You Can't Turn a Switch and Stop a Horse Eating

but with an Avery tractor it's entirely different - It eats only when it works. When you're through, turn a switch and your expense stops.

Horses eat three times a day, 365 days a year, whether working or not—yet government statistics show that farm horses only average 100 full days' work a year—the other 265 days they have to be fed for nothing.

Owners of Avery trucks report that they plow at less than half what horse or mule plowing costs—they also report a big saving in other farm work—discing, harrowing, ensilage cutting, road grading, etc.

In addition to the saving realized through the use of Avery tractors, users are also raising bigger crops, because they are able to plow deeper and do all the work of preparing their seed bed in just the right way and at just the right time.

Write to us or call at our offices and learn all about the wonderful Avery tractor.

## LANDES & CO.

Corner Second West and South Temple.  
Salt Lake City. Wasatch 830.



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"JUST OVER THE ARCH"

## High Salaries and Steady Employment

### COME ONLY TO THOSE WHO ARE PROPERLY TRAINED

SEEK BUSINESS TRAINING WHERE BUSINESS TRAINING IS A SPECIALTY. This school possess a Model Office where all the details of office routine are not only taught but PRACTICED. Our graduates know how to describe tracts of land, draw deeds, mortgages, bills of sale etc. They are trained in the use of all the modern office appliances, viz; the Mimeograph, the Dictaphone, the Adding Machine, the Protectograph Filing Cabinets, etc.

Our graduates are always sure of a position.

NO CUPS—NO TROPHIES—SIMPLY BUSINESS.

## Hoover Business College

52 West 2nd South  
Phone Wasatch 7280

Just over the Orpheum  
Salt Lake City, Utah



# Lesson In Sewing

## LESSON VI.

### PUTTING THE

#### DRAWERS TOGETHER.

#### The Flat Fell Seam—The Reinforced Seam—The Waistband.

Supplies—Thimble; Needle, No. 7 Sharps; Basting Cotton; No. 60 Sewing Cotton; Pins; Emery; Tape Measure; Scissors; Drawers; Note-Book.

#### The Flat Fell Seam.

Lay the two drawers portions on one another with their right sides together with their notches matching. Baste them in three-eighths-of-an-inch seams at the edge marked with double and triple notches. (No. 11). Sew the seams with combination stitches just inside the bastings (No. 11).

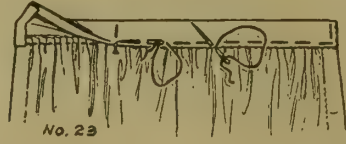
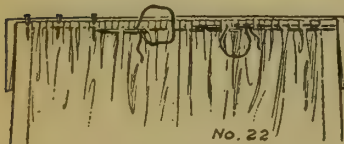
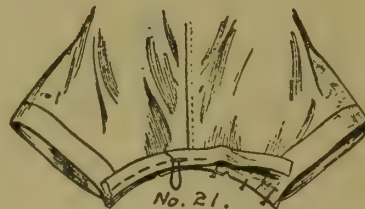
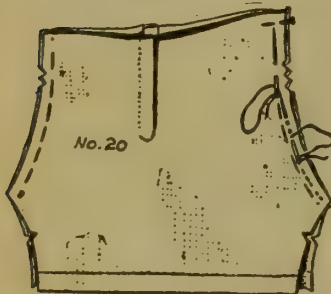
Fold the drawers so that the placket openings come in the fold. You can see this position in Illustration (No. 12). Trim off one edge of the seam

away if necessary, so that there is only three-eighths of an inch to turn under. Hem the fold edges of the strip to the drawers with fine hemming stitches. (No. 10).

#### Gathering the Top of the Drawers.

Gather the top of the drawers from lap to lap with fine gathering stitches (No. 13), placed three-eighths of an inch from the upper edge. Stroke the gathers so that they lie in neat folds. The Waistband.

Take one of your waistbands (cut by piece 2 of the pattern) and lay it on the wrong side of the drawers with one long edge of the band even with the upper edge of the drawers, (No. 13). Pin the two together, distributing the gathers in the drawers evenly. (No. 13). Baste them together three-eighths of an inch from their edges. (No. 13). Sew the seam just



to within an eighth of an inch of the sewing line. (No. 9). Turn in the other edge of the seam an eighth of an inch, crease it and hem it flat to the drawers. (Nos. 9 and 12).

#### The Reinforced Seam.

With the drawers still in this position (No. 12) pin together the edges of the leg seam of the drawers with the single notches matching. (No. 12).

Measure the length of the curved seam and write it down in your note-book. Cut a straight piece of material, seven-eighths of an inch wide and about three-quarters of an inch longer than the seam. Turn in one end of the strip three-eighths of an inch and place it on the drawers with one long edge even with the edge of the curved seam. (No. 12). Baste the strip and the two drawer edges together in a three-eighths-of-an-inch seam. (No. 12). Sew them firmly just outside the basting with combination stitches. (No. 10).

Trim down the edge of the strip and the edges of the seam to within an eighth of an inch of the sewing. (No. 10). Turn in the other long edge of the strip an eighth of an inch and crease it. (No. 10). Turn under the second end of the strip even with the end of the seam, trimming it

inside the basting with backstitches. (No. 13).

Turn in the other long edge and the ends of the band three-eighths of an inch and crease them. (No. 14).

Turn the band over to the right side of the drawers and pin it to the drawers with its long fold edge just covering the sewing of the seam and the fold edges at the ends even. (No. 14). Baste the folds at the ends together, and baste the long fold edge to the drawers. (No. 14). Overhand the folds at the ends together and hem the long fold edge to the drawers with neat hemming stitches. (No. 14).

#### A Bias Facing.

In drawers that are fitted at the top by darts a bias facing is used instead of a waistband.

#### The Buttonholes.

There should be a lengthwise buttonhole at each end of the band or facing and a crosswise buttonhole at the center of the front and back. Be careful not to cut the buttonholes too close to the ends and top of the band or facing, or they will pull out when the drawers are worn.

The buttonholes should be worked according to the instructions given. In the lengthwise buttonholes the round ends should come nearest the

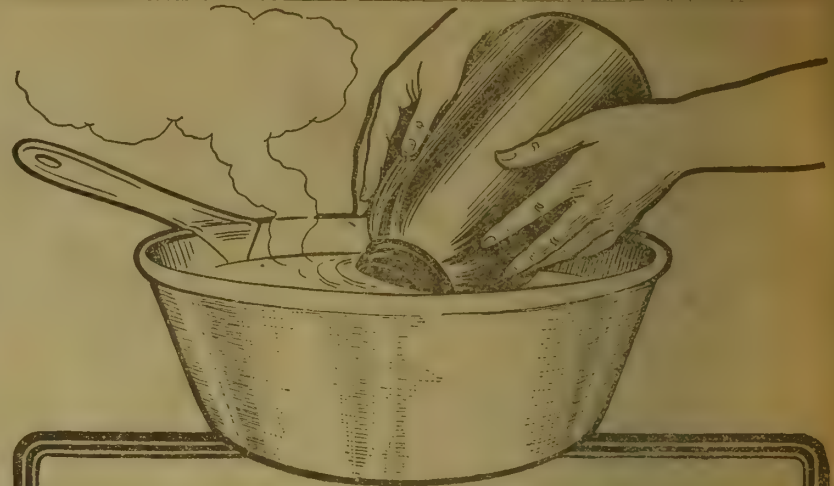
ends of the band. In the crosswise buttonholes the round ends should be nearest the top of the band.

#### Trimming.

Instead of hemming the drawers they can be trimmed with tucks and an embroidery ruffle or with tucks,

embroidery insertion and embroidery edging.

What good is a pin, if it looses its head? Is a man any better?



## TWO HINTS FOR HOUSEWIVES

Be sure your preserves are thoroughly cooked, for undercooked fruit may ferment no matter how tightly sealed. Then seal your preserves with

# Parowax

Pure Refined Paraffine

It safeguards them from mould and fermentation.

It's the easiest, cheapest and best way to seal preserves. No bothersome strings or papers. No disappointments next winter.

Parowax is absolutely harmless—guaranteed under the Pure Food Law. For sale at your grocers.

## THE CONTINENTAL OIL COMPANY

(Incorporated in Colorado)

Denver Butte Pueblo Boise Albuquerque Salt Lake City Cheyenne

## Enjoy Life; Have Better Health With "Table Queen"

Take the time you devote to making bread, plus the energy consumed in the drudgery, and invest it in something more pleasant and bring the added length of life to mother.

In place of home made bread serve one equal in every respect and very much better in flavor and more nutritious. There's one bread that always satisfies:

# ROYAL TABLE QUEEN

"The Best Bread Baker"

Housewives don't take the trouble that the Royal Baking Company does to scour the country for high grade flours and carefully select other ingredients. You don't find in home made bread a blend of four of the best wheat flours on the market, which you do find in "Table Queen."

There isn't a flavor in any bread superior to that of "Table Queen" and its brown crusty goodness suits any appetite.

Ask your grocer to send you two loaves of "Table Queen" and information regarding premiums.



An Honest Bread at An Honest Price 100% Pure

Royal Baking Co., Salt Lake City, Utah





## Send For This New Book It's Free

GOING TO BUILD? Then you need this profusely illustrated, 32 page book. It contains many beautiful illustrations showing the use of brick in the construction of attractive, inexpensive homes. In fact it tells the story of

## BRICK and Their Use

so clearly and convincingly we are certain you will be only too glad to build with brick—no matter whether it be a cottage, bungalow, a mansion, a factory or a public building. Brick is the material that has stood the test of centuries—that is time-proof, fire-proof, heat and cold proof, vermin-proof and at the same time highly artistic. Better send for a copy today—FREE for the asking—without obligating you in any way. A postal will do, or phone to Wasatch 951 and it will be sent to your address.

**Salt Lake Pressed Brick Co.**  
KEARNS BLDG. SALT LAKE CITY, UTAH  
Dept. U

Enclose this ad. with your request

### IF YOU WANT A BARGAIN "SEE ME"

Five acres good land, 2-room brick, water right, most of land in garden, joins electric line and main highway, six miles north of city Only \$2100—\$700 cash, balance easy.

Forty acres, east of Sandy, 3-room house, stable, water right. \$2100. Terms.

32 acres at Farmington, first-class land, primary water, right. \$200 per acre. Terms.

640 acres, near Deeth, Nev.; fine for dry farming; running water through land. \$7.50 per acre. Easy terms.

### IF YOU HAVE A BARGAIN "SEE ME"

GEO. W. DANLEY

707 Walker Bank Bldg. Wasatch 2989  
SALT LAKE CITY

## Roofing!!

Send for our Free Samples and Factory Prices. We can sell you the best roofing made at Money Saving Prices.

### 58c a Roll.

Cement and nails furnished free. Every roll fully guaranteed. Write us today for samples and catalog. Address  
OTTAWA MANUFACTURING CO.  
3041 King St. Ottawa, Kans.

## With Our Advertisers

DO YOU MAKE A PRACTICE OF READING THE ADS. WHICH RUN IN THIS MAGAZINE? IT IS MONEY IN YOUR POCKET TO DO SO.

ONLY THE ADVERTISEMENTS OF LEGITIMATE FIRMS ARE ACCEPTED.

THE WARES OFFERED BY THESE FIRMS ARE INVARIABLY THE BEST OBTAINABLE AT THE PRICE.

IF YOU BUY THEM ONCE, YOU ARE MORE THAN LIKELY TO CONTINUE BUYING THEM.

PLEASE NOTE WHAT OUR ADVERTISERS OFFER THIS WEEK. THEN FOLLOW THE ADS FROM WEEK TO WEEK—GET THE ADVERTISING HABIT.

# Swine In Increased Fertility

A. L. Ward.

If each of you will at a glance pass in review all that you have heard said about increasing soil fertility, or even maintaining the fertility, and if I were to ask you to briefly state the main theme of all that was said, I am sure that nine out of ten would say, "Grow legumes; raise livestock." "Apply baryard manure." We all know legumes may be depended upon to restore humus and nitrogen and portions of phosphoric acid and potash to depleted soils. There are three methods of utilizing them for this purpose. The first is to turn under the green crops. This is good, but a serious objection to a green manure lies in the fact that it must ordinarily take the place of a regular crop, so that the income for the land is lost for the season.

The second is to feed the livestock and return all of the manure and possibly some phosphoric acid and potash in addition. This too is good, but considerable labor is involved and necessarily there is loss of plant food from the manure in the storing and handling.

The third method, and without doubt the most economic and surest means of getting the maximum of the plant food voided by the animals, is to grow the crop and turn the livestock in on them. This of course applies to all crops and not only legumes, although the excreta from stock fed on a legume is worth more as a fertilizer than the excreta resulting from the feeding of any other crop. This is borne out by the fact that a ton of cowpea hay has 43 pounds of nitrogen, 5 pounds of phosphoric acid and 33 pounds of potash, with about 15 cents, 6 and 6 cents respectively, a total of \$9.03. In a ton of alfalfa hay we have plant food valued at about \$9.42. Other feed stuffs have a fertilizing value as follows: Corn meal \$5.66 gluten meal \$15.53, cottonseed meal \$26.16, meat scraps \$35.69, wheat \$8.49, oats \$6.70, skimmilk \$2.11, wheat bran \$12.30, wheat shorts \$10.50. Now in order to find the amount of nitrogen, phosphoric acid and potash which may be expected in manure or excrement, it is necessary to simply subtract from that contained in the food that retained by the animal body.

This is the part which is exceptionally interesting to us as swine breeders and should concern all pork producers and farmers. Just as a general rule and for rough estimates, we find that a food stuff passed through an animal is worth 75 per cent to 95 per cent of its original value as a fertilizer alone. Hence if it is used as feedstuff and the manure or excrement is lost, advantage is secured only by the feeding value of the material. If it is used only as a fertilizer, as is often the case with cottonseed meal, no advantage is secured from the fertilizing value. The quantity of the fertilizing value. The quantity of the fertilizing constituents of feeding stuffs retained by a fattening animal is comparatively small. Young and growing animals consume larger proportions and milk cows use a certain amount in their milk, but a considerable part of the fertilizing value of the feed still passes into the excrements.

The Texas experiment station by experiments with fattening steers

found that 42 per cent of the fertilizer value of the feed stuff is excreted in the solid excrement, while 53 per cent of the total value of the feeding stuff is excreted in the urine. Accordingly, if the solid excrement is saved, there is a saving of about 42 per cent of the fertilizing value of the feeding stuff. If the urine is saved in addition there is a saving of 95 per cent of the fertilizing value. The saving of the urine is a point that I will call special attention to later; it concerns us as hog men. In other words, if a ton of cottonseed meal is fed, having a fertilizing value of \$29.50, the proportion of its fertility which goes into the solid excrement has a value of \$12.39. That portion of its fertility which goes into the urine has a value of about \$15.

Bear in mind that these figures were for fattening steers. Now in order to get a comparison of manures or excreta of the various farm animals I submit the results obtained by the New York Cornell Station. Value per ton of manure, sheep \$3.30, hogs \$3.29, horses \$2.21, calves \$2.18, cows \$2.02. The same station gives the amount and value of manure produced per 1,000 pounds liveweight per years as follows: Hogs \$37.96 cows \$39.27, horses \$27.74, sheep \$26.09, calves \$24.45. These figures show that as regards amount and value of manure produced for an equal amount of liveweight hogs stand first, cows second, horses third and sheep fourth.

It is a fact often lost sight of in practice that the urine of animals is often the most valuable part of the excreta. Nitrogen is by far the most expensive of the fertilizer constituents, and analysis shows that one-third of the nitrogen passed out by the hog is found in the liquid excrement. Another point that we must emphasize is that manures and excrements not only contain plant food, but they supply the soil with organic matter, humus, which is very necessary to enable the soil to maintain in good condition. You all know that it improves the tilth of the soil; holds together loose and sandy soils; absorbs plant foods and holds it in solution, and which might otherwise be lost by leaching; promotes chemical action in the soil, by which means mineral matter is converted into plant food; dissolves plant food by virtue of the presence of carbonic acid gas in the humus, so that it can be taken up by the roots of the plant, and it retains moisture in the soil for the use of plants in the time of drouth, and thus often saves a crop.

Now we have shown that the hog produces the greatest value of fertilizer for his weight than any other farm animal. Now let us see if our methods of handling him enable us to get as full value from him as given amount of his excrements as we would from any other livestock. Our horses and cows spend one-third to one-half of the time in the stable or lot, where it is necessary to collect the excrements as manure and either haul it directly to the field or else pile it in a manure heap, and later convey it to the field. In both cases considerable labor is involved, and unless the excreta is caught on the very best of thick bedding a very valuable part of the liquid is lost at once. And in case it is put in a manure heap future deterioration takes place by

fermentation processes and leaching. What is the case with the hog? In the South our hogs are in the field practically all of the time. When it get too cold the hog seeks shelter in the small hog house which is erected in the field. This month he may be in pasture No. 1, next month in pasture No. 2, and so on, always in the field, where they are not only depositing all but about five per cent of the nitrogen, phosphoric acid and potash taken up by the crop just grown, but in addition about 95 per cent of nitrogen, phosphoric acid and potash taken up by the crop and other feeds being given them as a supplement to the pasture.

In this instance you see at once that no labor is necessary to convey the fertilizer of the field, no fears need be entertained about losses from leaching, fermentation, etc. Again more humus is added to the soil, for in the process of rotting in a heap a portion of the organic matter is destroyed.

Therefore, by this means and this means alone will the farmer and hog raiser get the fullest value of his crop as a feed stuff and a fertilizer and at the same time increase the soil fertility without cost.

### POINTS ON TOMATOES.

Do you know how to skin a tomato expertly. Are you not tempted to pare off the peel from the round side first? It is so easy to take this off that it seems as though it must be the quicker way, but it is not the right way. First cut out the stem butt with the core adhering to it, then remove the skin. No matter what use is to be made of the tomato, this is the way to handle it unless the skin is to be left on as when it is stuffed or baked whole.

A tomato is over 94 per cent water, and good water at that, which evaporates when this vegetable is baked. In some cases, when its wettest part is removed, to be replaced by a stuffing, the only thing left of the tomato after it is baked is a flavor, and sometimes but a very slight flavor at that.

Whole tomatoes may be boiled without breaking up or losing their shape, though the peel and core have been removed. This method of preparing them leaves to them their natural bulk, and they may be just as handsome for a garnish as most baked tomatoes. They may be made handsome by boiling them on a bed of flavoring vegetables, in beef stock or water and butter, and a little sugar, if the liquid is all boiled away.

But plain boiled tomatoes with a seasoning are also good; better if a little butter is added to the water, which if not boiled away, may be used in soups and sauces. These are good cold with French dressing as a salad, and may be eaten by those who find the raw tomato intolerable for some reason. Boil carefully in an aluminum kettle. They are likely to burn on to enameled ware.

### BUMP. BUMP. BUMP!

A South Dakota railroad is noted for its execrable roadbed. A new brakeman was making his first run over the road at night and was standing in the center of the car, grimly clutching the seats to keep erect.

Suddenly the train struck a smooth piece of track and slid along without a sound. Seizing his lantern, the brakeman ran for the door.

"Jump for your lives!" he shouted. "She's off the track!"



# Relation of Moisture To Plant Development

By L. A. Wilson, Supt. Sevier Experiment Farm.

Of all the factors influencing plant growth that are under man's control the moisture relation is by far the most important. In the absence of water, all plant life as now organized would be impossible and consequently all plant life would perish and the earth would once more become a huge, lifeless desert. Water is just as necessary and important to the plant as it is to we humans, and its employment by the plant is quite analogous to its employment in the human body.

Its chief function to plants, however is as a solvent and carrier of plant food. The tiny microscopic rootlets (root hairs) along the younger, finer branches of the root-system absorb moisture surrounding the soil particles by a process termed osmosis, a complicated process not yet thoroughly understood by plant physiologists. However, it is definitely known that so long as the percentage of moisture in the soil is above the wilting coefficient and the concentration of the soil solution is less than the concentration of the root sap within the root-hair moisture is available to the growth of the plant. The wilting coefficient is the percentage of moisture in the soil surrounding the roots when the plant wilt beyond the point of recovery and may be below the actual percentage of moisture in the upper 6 to 10 feet of soil (a depth to which staple crops) due to a shallow rooting system induced by early or too heavy irrigation.

It is upon this principle that an economy in irrigation hinges. If we irrigate early in the development of the plant, shallow rooting is induced and the plant then uses only the upper few inches of the soil and it is then necessary to irrigate quite often to supply the upper soil with sufficient moisture. If these frequent irrigations are heavy the plant food is washed down into the deeper soil beyond the reach of the shallow root-system, and if the practice is continued for a number of years, the upper soil becomes depleted in plant food and we then say it is "run down." Perhaps this expression fits the case better than most farmers imagine for the plant food has in reality been run down toward China, and often so far that it will never be recovered. In addition to this practice increasing the cost of irrigation, it is uneconomical in that only the shallow, upper soil is used and in that the temperature of the soil is reduced far below the optimum (most favorable) temperature for the growth of the plant. Every time we irrigate, we check plant growth as a result of this cooling of the soil and the temporary exclusion of atmospheric oxygen from the roots. And why farm only a part of your soil? And why not obtain full benefit of our deep Utah soils?

**Increase Your Acreage by "Deeper Farming."**

On the other hand, if irrigation is delayed until the plant has driven its roots deep in its search for moisture, we will then have a larger

area of root surface and consequently a root-system capable of sustaining a heavier growth than the shallow root system. This larger root area will thus be able to make a more economical use of the soil moisture and it will not be necessary to irrigate so often, hence decreasing the cost of irrigation, maintaining the optimum soil temperature for plant growth for longer periods and bringing more plant food within reach of the roots. Roots will delve for moisture just as sure as you would dig a deep well if water could not be had at the surface.

Evidence of this theory of root development can be seen clearly on the sugar beet plats of the Sevier Experiment Farm. Those plats which received irrigation early in July wilt quite low in very warm days while the beet plant in the non-irrigated plats show no signs of wilting, and the plats which were irrigated late in the season do not wilt and in addition show a larger size beet.

That plant growth is controlled by the moisture relation to an extent which means success with the proper irrigation or failure with careless, ill timed irrigation has been conclusively demonstrated. In fact every irrigator with an observing eye can attest to this, but a striking example of this principle is furnished in the experimental work being done at Joseph that will make a visit to the farm of practical benefit to every farmer of Sevier Valley.

## SHALL WE SELL WHEAT

The writer's attention was called some time ago to a farmer who has a two-year crop of wheat in his barns, exclusive of this harvest for the present year, which he is holding for a price of two dollars. While this is doubtless an exceptional case, it does raise the question as to the wisdom of holding one's crop for future high prices. While it is undoubtedly not wise to hold for the price this particular farmer seeks, and recognizing fully that the price of wheat during the ensuing ten months rests upon a large number of uncertainties, it would still appear that the farmer who holds his wheat until January, February, or even later, will realize greater profits than he who sells before that time. There are, however, a large number of facts to be borne in mind. Practically every country of importance in the world has raised more wheat this year than last. The Russian crops, exclusive of Poland and Siberia, are in the neighborhood of 100,000,000 bushels more than last year; Italy's crop is 20,000,000 bushels larger; the United Kingdom has 3,000,000 bushels more. Reports from Germany and Austria indicate a crop above normal (thanks to the prisoners of war) and in addition to this, these countries have purchased practically the entire Romanian crop at the very time that the allies were dickering for it. South American wheat is said to be of fair quality, and our own crop is, of course, enormous and of high grade.

Yet in spite of these factors, it would seem as tho it would be good

policy to hold for some months, if the farmer can afford it, reckoning his interest and insurance among his other considerations. The Russian crop will largely be locked within her own borders as long as the Turks can hold the Dardanelles, which will still be for some time, in all probability. The northern ports of Russia will be closed to navigation because of the cold weather within a month or so. This means that the Russian supply will scarcely be available for general use until such time as Constantinople is captured, when the price of all cereals will doubtless break sharply. In fact, it may well be said that the price of wheat is being determined right now on the Gallipoli peninsula. The crop in the rest of Europe has been harvested and is being rapidly consumed. In fact, England is already making arrangements for the purchase of our surplus crop.

If he can afford it, therefore, the wheat owner had best wait before selling. The caution must be not to hold for unduly high price—certainly not for \$2 wheat (as some farmers, unfortunately, are still doing,) and it will not be bad policy to sell without waiting for the price even to equal the high point of last year. The market, too, must be closely watched, for it will be far more normal and less widely advertised than last winter, and decisive actions in the war zone are possible at any moment. July 1915 prices on the Chicago pit for No. 2 red averaged 40c, a bushel more than for the same period last year, and it is still selling around \$1.14. From February until May of this year the same wheat never fell below \$1.51 and the monthly average for May was \$1.63½. The

shortening of the distance and of the time of delivery through the opening of the canal route should, moreover, enable the seller to take better advantage of current prices.

One may conclude, therefore, that while it is not likely that prices will remain as high this year as last, they probably will rise, and with the above precautions borne in mind, he will be comparatively safe who holds for some time to come before trying to realize on his crop.—Howard T. Lewis, University of Idaho.

## TOOL- CHEST DIALOGUE

"It is 'plane' that I love you," he began.

"Is that on the 'level'?" she asked. "Haven't I always been on the square with you?"

"But you have many 'vises,'" she remonstrated.

"Not a 'bit' of it," he asserted.

"What made you 'brace' up?" she queried coquettishly.

"The fact that I 'saw' you," he replied, with a bow.

"I ought to 'hammer' you for that," she answered saucily.

"Come and sit by me on the 'bench,'" he urged.

"Suppose the other should 'file' in," she murmured. "You shouldn't let your arms 'compass' me."

"I know a preacher who is a good 'joiner,'" he suggested, and they rushed off for the license.—Exchange.

Here is an advertisement that appeared in the classified columns of a country weekly recently: "For Sale—Good cow giving milk, also, hay." It has been remarked that possibly, if treated kindly, this remarkably productive cow might also be induced to lay eggs.—Exchange.

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## TILE DRAINAGE OF DRY

## FARM WHEAT LANDS

(Continued from page one)

comodate the moisture from the later rains. The studious and practicable farmer will appreciate these observations when he remembers:

1st. That soils contain from 38 per cent to 52 per cent of open spaces between the soil grains.

2nd. That these spaces are always filled with one of three elements, viz: Air, water or vacuum; and when completely filled with any one of these elements there is no room for either one of the other two.

3rd. That when soils, or any substance, is rendered air tight it is also water tight, and vice versa.

4th. That air is much lighter in weight than water and will quickly escape upon the presence of water, provided it had a road to travel in.

With these natural laws clearly understood we can readily see that with a sheet of water on the ground such as frequently is found to be the case in the spring when the frost is gone, the water is prevented from percolating the soil because the air in the soil beneath has no chance of escape only as it bubbles up through the water, which is a very slow mechanical process.

The tension of the atmosphere is so great in our arid. climates that usually about one-third of this very desirable and valuable element is lost in evaporation while awaiting this slow process of ariation. On the other hand, if the subsoil is perforated with a system of tile drains the facilities offered to the circulation of air permits the spaces in the soil to become more or less connected and will form capillary lines to the drain lines, so that when water is applied by natural or artificial means to the surface of the ground, the air is permitted to escape through the tile drains to the outlets if required to allow the water to occupy the spaces in the soil; the free waters are thus permitted to settle into the soil quickly and after supplying the soil grains with such capillary moisture as they will retain (which is the only moisture the crops can utilize) passes further into the soil until the free waters are entirely exhausted in the natural process of distributing the moisture to the soil grains.

The depth of the drains is very important here because they should be deep enough so that no free waters can reach them. In clay soil the tile should be from 4 to 6 feet below the surface, and should be deeper as the soil is found to be more sandy until in sandy soil the tile should be placed from 7 to 9 feet deep, because the same amount of water will moisten a deeper strata of sandy soil than that of clay soil.

We want the moisture to go as deep into the ground as possible without any of it running out of the drains; the drains are installed for the purpose of conserving moisture and not for the purpose of discharging any water. The water is conserved by being permitted to pass below the surface rapidly and save that which would evaporate from the surface. Conservation is also increased because the water passes into lower stratas where it is not reached by evaporation, and can escape only as it passes through the crop system to the air.

## IRRIGATION SUGGESTIONS.

There was recently issued by the Montana Experiment Station, a poster called, "Irrigation Suggestions."

Irrigation water intelligently used is one of the most valuable resources in the State. Improperly applied, it is very harmful. Exercise care in its use and irrigate the greatest possible land with the water available. Avoid the difficulties arising from over-irrigation.

Save the rainfall.—Early spring cultivation of plowed fields and harrowing or disking immediately behind the plow in the case of spring plowing holds the water for use by the crop. Do not let the fields dry out before spring planting. Potatoes, corn, sugar beets, etc., should be cultivated as soon as they come up and kept cultivated till time to irrigate.

Keep the soil fertile.—Fertile soil produces a crop with much less water than does a poor soil. Grow soil-improving crops like clover, alfalfa, peas, etc., in a systematic rotation on each field. Use all the barnyard manure available.

Prepare for irrigation.—Level the fields before seeding. Clean out all head ditches and main laterals immediately after spring seeding. Put in field laterals and dams as soon as the grain is a few inches high. Use a level in putting in laterals and do not get more than 1 inch fall to the rod. Survey laterals every spring and do not follow old lines exactly as this tends to make a depression in the field and the level of the field changes somewhat with each season's cultivation.

Irrigate at the proper time.—Grain crops ought to be irrigated very soon after the crop shades the ground. In most parts of Montana one irrigation is sufficient for grain crops if the spring moisture is conserved by tillage.

Alfalfa and clover ought to be irrigated either sometime before cutting so the ground will be dry enough to permit the hay to cure, or immediately after the crop is removed.

Sugar beets should be irrigated in furrows between the rows, care being taken not to flood the beets. If cultivation has been properly kept up irrigation may be delayed until in July. Hold off the water as long as possible without causing the beets to suffer. Two irrigations should make the crop. After irrigation cultivate as long as there is passage through the beets.

Do not overirrigate.—Land is irrigated to increase the crops. This is most effectively done when the soil is moistened to a reasonable depth. When this has been accomplished further irrigation is harmful. One-half foot in depth over the land is usually ample for grain crops, and a foot for hay crops. Where the water supply is limited, as compared with the land available, much more crop will be produced by the moderate use of water over a large area of land than by adding an excessive amount of water to a smaller area.

Keep down the alkali and prevent waterlogging of the soil.—Leaky ditches and the excessive use of water over the land are the chief causes of these evils. Repair the leaky places and do not use too much water or flood the land too long. Prompt spring cultivation and careful irrigation will avoid many of the alkali troubles.

Kill the weed.—It takes as much water to grow weeds as it does the

same weight of valuable crops. Proper crop rotation and thorough cultivation will hold the weeds in check.

Measure the water.—Measure the water used. The seed is measured, and a proper amount of water is just as essential. By installing simple, inexpensive weirs, any farmer may measure water accurately.

## STRAW AND MANURE.

Geo. W. Graves, Idaho Experiment Station.

We are just beginning to realize the value of stable manure. While the market gardener has for years depended upon it for success, the general farmer is just beginning to see its value, and to give it a place in his farming scheme. With its more general use is also coming more care in saving it, without a loss of the ingredients.

The liquid portion of manure constitutes an important part of it. It may be of interest to note that over half the nitrogen and nearly half of the potash produced by horses is in the liquid excrement. Over half the nitrogen from cows is found in the liquid while there is five times as much potash in the liquid as in the solid excrement. Liquid manure from the pig contains one fifth of the nitrogen and one-third of the potash. Sheep liquid manure contains one-half the nitrogen and two-thirds of the potash. In general it may be said that the liquid manure is as valuable as the solids when we think of the total plant food, but when we consider the availability, we find that that found in the liquid is immediately available, while that in the solid becomes so only slowly. While the nutrients in the liquid are easily available they are very easily lost, and that is one of the big problems we run against in conserving the manure while it is accumulating.

How can we best save it? The first thing to do is to see that the floor of the stable is water tight. Quit using dirt floors. Then catch the liquid. This can be best done by use of an absorbent. Fortunately we have at hand a cheap and an efficient absorbent. We want to keep the animals clean and this absorbent is ideal for that purpose also. I refer, of course to straw. Straw will absorb several times its own weight. In addition to this, it contains valuable fertilizing elements in itself. It contains one-third of the nitrogen, one-fourth of the phosphorus, and three-fourth of the potassium of the wheat crop. With the combination, then, we are returning a considerable amount of fertility to the soil. Certainly there is no profit in burning our straw stacks. That is a practice of fifty years ago, and has no place on the modern farm. It is worth figuring pretty closely whether it is even wise to bale and sell the straw, or sell it to a more progressive neighbor to use as fertilizer on the farm across the road.

One man of color said to another: "Nigger, you know them English mans got pistols what shoots across the sea?"

"Shaw, that's nothin'—them Germans got guns—all dey wants yo' address."

## IN THE CLASSROOM

After a somewhat lengthy explanation of the wonders of the human body the teacher decided to question the class.

"Johnny," she said, "can you give me an example showing how the body will adapt itself to charged conditions?"

"Yes'm," quoth Johnny, "Pa keeps gettin' fatter and fatter every day and still his skin don't crack."—Exchange.

## Pattern Department

Full directions for making as the quantity of material required, accompany each Pattern. Price of each Pattern, 10c; no extra charge for postage. When ordering, all you have to do is to let us know your name and address, the number and size of each Pattern you want, enclose 10c for each pattern, and address all your orders to: PATTERN DEPARTMENT, THE UTAH FARMER, LEHI, UTAH.



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7346—Ladies' Apron. Cut in sizes 36, 40 and 44 inches bust measure. Linen, gingham or calico can be used to make this apron. Price of pattern 10 cents.

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# How to Make Tomato Pulp Useful

In Utah we grow tons of tomatoes. Not only for the canning factory but nearly every one has a tomato patch. How many are making the most out of their tomatoes. Tomato pulp is one form in which tomatoes may be used with which the average housewife is not as familiar as with the others. It is, however, a convenient and cheap product for use as soup stock, seasoning, and in sauces for meat and fish. The fact that in the past much tomato pulp has been made from inferior material and under unsatisfactory conditions need not now deter the purchaser, for a little care in the inspection of the label on the container and of the product itself will enable anyone with a reasonable degree of certainty to select a wholesome and sound brand, although with tomato pulp, as with a number of other food products, the purity of the article in certain cases can be determined conclusively only by a chemical or microscopic examination.

Tomato pulp is made by removing the skins and seeds from the vegetable by putting it through a machine called a cyclone. The resulting pulp is then boiled down to the desired consistency. In common practice the volume of the tomatoes is reduced in the process about one-half. Ordinarily, the pulp is packed for household use in No. 1 cans, which hold approximately 10 ounces net.

Although tomato pulp prepared in this way has been on the market for some time, it has not been used in this country as extensively as in Italy and elsewhere in Europe. Many housewives apparently believe that it is of no use except as a foundation for tomato soup. It can, however, be utilized in many other ways which will readily suggest themselves to any experienced cook. In the past, however, the product has been found to be so varied that a recipe which gives good results at one time may prove most unsatisfactory at another, even though the same brand of pulp is used. This is easily understood when one remembers that before the passage of the Federal Food and Drugs Act there was nothing to prevent the introduction into the product of what is known as canners' waste, the refuse from the tomato-peeling tables in tomato-canning establishments. Much of this material was most unsatisfactory from a sanitary standpoint, and at best its composition could not be definitely known in advance.

Under the Federal Food and Drugs Act, however, much of what was known as "skin and core" pulp has been eliminated from interstate commerce and has thus left an opening for high-grade whole tomato pulp. Under former conditions the manufacturer of this high-grade product could not compete with inferior brands because of the low price at which the latter could be sold. Although the consumer usually pays about 5 cents a can for high and low grade pulp alike, there is a great difference in the cost of manufacture. "Skin and core" pulp has sold at wholesale for as little as 16 cents a dozen cans, while good sound pulp from whole tomatoes can scarcely be put out for less than 35 or 40 cents.

Although, as has been said, much of the objectionable pulp is no longer on the market, it is well for the customer to bear in mind two points: Pulp that is made not from whole tomatoes but from trimmings, and passes through interstate commerce, must bear upon the label some such expression as "Made from small tomatoes and trimmings"; "Made from tomatoes and parts thereof"; "Made from pieces of tomatoes and trimmings"; "Made from tomato clippings and whole tomatoes," etc. Tomato pulp of this character is frequently a sound and wholesome product, but when trimmings and clippings are used it is more difficult to put it up in a satisfactory manner than when only whole tomatoes are utilized. The Federal Food and Drugs Act, of course, does not apply to food made and sold wholly within the boundaries of a State. Such products are under the control only of State laws and municipal regulations as administered by food officials.

After all, however, the appearance of the pulp itself is the real test. If a can of good pulp is examined, it will show a smooth, even texture, and be practically free from little black spots, many of which come from decayed portions, indicating that tomatoes with black or dry rot had been used. In very low-grade products, a peculiar, finely curdled appearance is sometimes found. There are forms of deterioration in tomato pulp, as well as in other food products, which cannot be detected except by a chemical or microscopical examination, but for all practical purposes a careful scrutiny of the label and the pulp will enable one to judge correctly the product. Under present conditions, however, the housewife who bears these suggestions in mind may effect a considerable saving by a more extensive use of tomato pulp. She will obtain a wholesome product which makes an excellent adjunct in many ways for the table.

## FORGE LINING

In any blacksmith shop that does much work, there is always more or less trouble in getting the forge lining to stay in any length of time. There are a great many ways of making the lining and there are also several companies who put a compound on the market to be used for this kind of work. The material can be bought much cheaper and will last just as long if bought and mixed in the shop. The following mixture has been used successfully in the Colorado Agricultural College shop where the forges are in use eight hours a day for six months and where the linings get the hardest kind of wear.

- 10 parts fire clay.
- 9 parts pulverized fire brick.
- 1 part clean sharp sand.

Put the mixture in place, then burn dry.

Another mixture that has been in use here at the college for the past three years and which has proved a most excellent one, is made of the following:

- 9 parts asbestos.
- 6 parts fire clay.
- 1 part clean sharp sand.



**REST A WEEK**  
or so at the Beaches  
**Long Beach—Venice**  
**Catalina**  
Then see the  
**Expositions.**

**Three Daily Fast**  
Trains leave Salt  
Lake City 8:45 a. m.  
1:00 p. m. 5:00 p. m.  
Ticket office 10 East  
Third South  
Phones 3501-3502

**\$35.00 to San Diego**  
**And Return**  
**Direct**  
**Tickets on Sale Daily**  
**Limit 3 Months**

**\$35 to Los Angeles**  
**or San Francisco**  
**Tickets on Sale Daily**  
**Limit 3 Months**

**\$62.50 to Los Angeles**  
**Return via**  
**Portland**  
**3 Months Limit**

**Go via**  
**Los Angeles**  
**to the**  
**Expositions**

# Summer Excursion

Via



Following Rates Apply From Salt Lake City.

## EAST

Denver .....	\$22.50
Colorado Springs.....	22.50
Omaha .....	40.00
Kansas City.....	40.00
St. Louis.....	51.20
Memphis .....	59.85
Chicago .....	56.50
Minneapolis .....	53.85

Correspondingly low rates to many other points.

## SELLING DATES

August 4, 11, 18, 25;

September 1, 8, 15.

Limit, October 31.

Stop-overs; Diverse Routes.

## WEST

Portland .....	\$37.00
Seattle .....	44.50
Tacoma .....	42.80
San Francisco, via Ogden, .....	35.00
do. one way via .....	
Los Angeles.....	35.00
do. one way via .....	
Portland .....	53.50
Los Angeles, via South- ern Pacific .....	40.00
do. one way via .....	
Salt Lake Route.....	35.00
do. one way via .....	
Portland .....	62.50

Side trip rate Los Angeles to San Diego and return via rail \$5.00, and via steamer \$4.00, in connection with circuit tour tickets.

Tickets on sale daily to November 30, 1915, inclusive.

LIMIT, three months from date of sale, but not to exceed December 31, 1915.

## NORTH

Excursions to northern Utah and Idaho points, August 14, 28; September 11, 25.

Proportionately low rates from other Oregon Short Line

Stations—See agents.

**HOTEL UTAH**  
**City Ticket Office**



For the Buyer

# THE FARMERS' MARKET PLACE

For the Seller

## THE GEM HERD.

### Improved Chester White Swine

The Home of the Western Prize Herd. My winnings at Idaho State Fair 1913, were 13 first, 3 seconds, champion boar and sow, and champion fat barrow. At a Tri-County fair held at Jerome, Ida., I took all but one second. I have anything wanted in Chesters from a weanling pig to a champion boar or sow at prices all can afford. High class stock. Write me.

For Reference—all old customers.

**GEO. H. LAWSHE.**

Falls City, Idaho

## FOR SALE

A few choice registered and Grade Holsteins, including a yearling grandson of "The King of the Pontiacs."

**GEO. A. DIXON**

Garland

Utah

## WE MAKE WHAT WE CALL

### A Debt Reducing Loan

YOU CAN PAY OFF THE PRINCIPAL GRADUALLY.

### MILLER & VIELE

FARMS LOANS

803-7 Kearns Bldg.

Salt Lake City.

## WHY NOT ADVERTISE?

If you have some pure bred stock and want to sell them, why not use a little advertisement on this page? It will bring results. Try it.

## Sheep, Cattle Stallions, Jacks

### FOR SALE

Pure bred Cotswold's, registered and non-registered, in small or large lots. Registered Shorthorns. Beef and milk strains.

### ROOSEVELT LIVE STOCK CO

CLEVELAND, IDA.

Edwin Bennion.

W. R. Smith

## BUTTER WRAPPERS

We carry a large stock of the Best Vegetable Parchment Butter Wrappers and Especially Prepared Ink for Printing the same. We furnish them Postage Prepaid at the following Prices, money to accompany order.

100	.....	\$ .90
200	.....	\$1.25
500	.....	\$2.00
1000	.....	\$2.75

Send all orders to

**THE UTAH FARMER**  
LEHI, UTAH

## HOW TO PRODUCE CREAM THAT MAKES GOOD BUTTER.

(Continued from page three)

churn out exhaustively and yields an excessive amount of buttermilk, augmenting the loss of fat and thereby reducing the churn yield.

There are no advantages in producing a cream testing higher than 45 per cent. Too rich cream is undesirable because it tends to clog the separator; it increases the loss in handling due to sticking to the receptacle; it makes difficult accurate sampling and thereby tends to yield incorrect tests.

It is desirable to produce somewhat richer cream in summer than in winter to prevent excessive souring in summer and difficult handling in winter.

### Protection of Cream in Transit.

The cream should be kept in the cooling tank until it leaves the farm. While being hauled on the wagon and waiting for the train at the station, it should be properly protected against heat in summer and cold in winter. This can be done by using a covered wagon for hauling, or by hauling the cream in insulated cans, or by slipping a jacket over the cans, or by covering the cans with a wet blanket in summer and a dry blanket in winter.

If the cans arrive at the station long before the train time, as is often the case, a cooling tank filled with water and located in the shade, should be provided so that the cream is reasonably protected against hot summer weather.

The impression among many cream producers appears to be that sour cream contains more butterfat and yields a higher test than sweet cream. For this reason some farmers purposely keep their cream until it sours and often store it in a warm place to hasten the souring. This impression is entirely erroneous. The acidity or sweetness of cream has no effect on its fat content, nor on the resulting test.

On the other hand this practice of causing the cream to become extremely sour spoils its chances to make good butter and renders difficult the taking of a representative sample and thereby lessens the reliability of the test; for the accuracy of the test depends above all things on the accuracy of the sample.

Every cream producer should take pride in delivering cream of the proper richness, that is smooth and uniform in body, sweet or only slightly sour and has a good clean taste. This is possible without unreasonable labor or expense; it can be accomplished on every dairy farm by properly adjusting the cream screw, thoroughly washing the separator after each separation cooling the cream promptly and keeping it cool by setting the cans in cold water, keeping the warm cream in a separate can until it is cooled and by making from two to three deliveries each week.

As long as our creameries receive inferior cream, they are unable to secure top prices for their butter and can pay only second grade prices for butter fat. Good cream will enable them to build up a reputation for good butter, which means increased demand, higher prices and larger returns to the cream producer.

## RICHARDS DEFENDER

The Sire of Durocs With Immense Size, Extreme Length and Bone Excellent Feet.

250 Choice March and April Pigs ready for delivery now. Can furnish Boars and Sows not related to each other.

Also a few Choice Sows bred to RICHARDS DEFENDER and VIRGINIA ILLUSTRATOR, a Giant Son of the 1000 Pound Illinois Grand Champion ILLUSTRATOR, who sold for \$2000.00.

When you buy Durocs buy from an old and reliable firm who guarantee to please you or refund your money.

### RICHARDS LIVE STOCK CO.

Successor to Richards Brothers.

VIRGINIA

IDAHO

## Have You Any Livestock to Sell?

What we have done for others we ought to be able to do for you. You may have some surplus stock that you would like to sell. A small advertisement on this page will do it. Here is the test, read this letter.

STATE INDUSTRIAL SCHOOL  
OGDEN, UTAH

August 5, 1915.

The Utah Farmer:  
Lehi, Utah.

Gentlemen:—Enclosed you will find our check in payment for advertising space in your paper from July 3rd to July 31st.

In as much as we have sold all our stock which we advertised we shall deem it a favor to kindly discontinue our ad and wish to express our thanks for services rendered and appreciate the promptness with which we disposed of our stock, through the medium of your paper.

Kindly sign the enclosed voucher slips and return them at your earliest convenience.

Respectfully,  
State Industrial School  
Per M. G. GRAAF,  
Clerk.

## SILAGE INVESTIGATION

The Experiment Station of Nebraska has been carrying on an extensive investigation during the past year on the chemistry of the processes which take place during the ensiling of various green crops. Special attention has been given to silage made from mixtures of alfalfa and sweet sorghum. Six small silos holding about one ton each were filled in September, 1914, with various mixtures. Two of these silos were opened during the second week of August, 1915, and the silage in each was found to be in perfect condition. The first silo contained a mixture of one part sweet sorghum and one part alfalfa, while the second contained a mixture of one part sweet sorghum and two parts alfalfa. Alfalfa alone will not make silage because the plant does not contain enough sugar to insure the production of sufficient acid to preserve the silage. The acid produced from the sugar in the green plant by bacterial action preserves the silage. By mixing sweet sorghum with the alfalfa the necessary sugar is supplied.

## HOW TO OIL A FLOOR

1. Remove all dirt and dust with turpentine or gasoline by rubbing with a cloth. Strong washing powders are likely to raise the grain.
2. Apply a good grade of floor oil or boiled linseed oil with cloth or brush. The oil should be rubbed in with a cloth. Allow to dry for eight or ten hours.
3. Remove all excess oil by rubbing with a cloth. Cotton underwear is admirably suited to this work.
4. If the floor is in bad condition, apply a second coat of oil after a few days, removing excess oil, where necessary, as with the first application.

Keep growing crops cultivated.

If you want to obtain the best blooms from your flowers, keep the seed pods picked off.

If you want to destroy those trouble makers, the weeds, for next year, keep them all from going to seed.



# Agriculture Lesson IX

Prof. J. C. Hogenson.

## SOILS.

The eight most abundant elements in the earth's crust and their proportion are: Oxygen, 47. per cent; Silican, 27.9 per cent; Aluminum, 8.1 per cent; Iron, 4.7 per cent; Calcium, 3.5 per cent; Magnesium, 2.5 per cent; Potassium, 2.4 per cent; Sodium, 2.7 per cent.

Rocks may be broadly divided into three classes:

1. Sedimentary rocks formed by deposition in water and hence are more or less stratified.

2. Metamorphic rocks formed from rocks originally sedimentary by subterranean heat in the presence of water. Usually these rocks are crystalline.

3. Eruptive rocks, such as are formed from the molten material ejected from volcanoes or fissures. They are crystalline or not according as they cool either rapidly or slowly. Sedimentary rocks are forming today just as they were ages past, by being deposited in either sea or fresh water. They may be classified as follows: (a) Chemical precipitates such as chlorides, oxides, carbonates, silicates, sulphates, phosphates, etc. (b) Inorganic material, such as sandy, gravelly, clayey and calcareous substances. The sandy and gravelly stones are formed from the debris of pre-existing rocks which have become disintegrated. These become recemented from loose sands and gravels.

The clayey stones consist of clay substance with more or less sand. These rocks can only be found in quiet waters.

The calcarious or lime stones are formed in comparatively shallow seas or fresh water from shells and skeletons of various organisms.

Metamorphic rocks are formed through the action of heat from sedimentary rocks, thus limestones are changed to marbles of various degrees of purity and also to slate of various kinds.

Sandstones are changed to quartz, gneisses and schists; the clay rocks are changed to the granites, etc.

The eruptive rocks are usually divided into two groups: The one has a large proportion of free quartz and is acidic and usually of a light color; while the other is basic, containing no free quartz, and is commonly of a dark color, caused by the presence of iron.

Usually granite soils are rich in phosphoric acid, because of minute crystals of apatite in it (phosphate of lime) from fields are present. Granite soils always contain potassium.

Eruptive rocks usually form very productive soils. They decompose very slowly.

Limestones are very slow to disintegrate.

Sandstone soil is usually poor in plant food though in arid regions this is not always true.

Clays occur in nature in a great variety of modifications such as porcelain clay, pipe clay, fire clay, potters' clay, brick clay, etc. Porcelain clay is chalky kaolinite; pipe clay is more plastic; fire clay is clay mixed with some coarser infusible material, such as quartz sand; potters' clay is more or less pure; brick clay is impure, containing considerable sand and iron oxide.

Nearly every fertile soil contains a relative percent of silt and humus. Soils containing 80 per cent of sand and less than ten per cent of clay are called sandy. The finer the sand the more valuable is the soil. When the soil contains from 60 to 70 per cent of sand it is called sandy loam. These are valuable soils for early crops. Soils containing 60 per cent of more of clay and silt are called clay soils. They are usually heavy and cold. The loam soils are the most useful, all around, soils. They contain from 40 to 50 per cent of sand and 15 to 25 per cent of clay.

Peat or muck soils are the black soils produced when a luxuriant growth of plants decays slowly under water for many years. When the vegetation is but partly decayed so that the soil is very spongy and fibrous it is called peat. When it has become further decayed, it is called muck. These soils are of no agricultural value unless mixed with a certain per cent of the mineral elements of the soil.

The name loess is applied chiefly to large areas of soils that have been carried to their present resting places by water or wind, and which show no layers being of the same nature throughout. The largest deposit of these soils is the alluvial loess of the Mississippi valley.

Adobe soils are found only in arid regions, particularly in Utah, Arizona, California, New Mexico, Colorado, and Western Texas. They consist largely of clay and silt, partly worn down from surrounding high land, and partly blown there from elsewhere. They are exceedingly sticky when wet, and bake very hard when dry. They are usually gray in color.

### The Subsoil.

The soil immediately beneath the richest part of the surface soil is called the subsoil. It may be of at any depth an extends downward to the underlying rock. The difference in the soil and the subsoil lies chiefly in the color and texture, due to the greater amount of humus near the surface. The subsoil, as a general rule, does not contain so much available plant food as does the surface soil; though in many parts of the arid region, this is not true.

### The Formation of Soils.

The agencies which are continually at work in the destruction of rock to form soils are two—1st chemical agencies, and 2nd, mechanical agencies.

Under the chemical agencies we place first the atmosphere. The oxygen is a very active agent in causing the crumbling of rocks as is also carbon dioxide, which has the power of decomposing many substances, thus causing them to break to pieces and form soil.

There are always certain chemical changes which are going on in the soil. Nitrogen is being changed by means of bacteria to nitrus and nitric acids, ammonia, and nitrates. These different compounds in turn help in the decomposition of other compounds, and in the formation of new ones.

Water is placed next under the chemical agencies. It is the most universal solvent, as there are no substances that are entirely insoluble in it. It does this by the power it

has of giving off oxygen and by taking oxygen from other substances and also of adding hydrogen to them. A solution is a liquid holding in suspension small particles of solid matter, this solid matter is divided into so small particles that by the action of the water in which they are held they are easily decomposed and new chemical substances and compounds formed.

Weathering may be defined as the action of the chemical agencies on rocks, causing them to crumble and form soil. Under mechanical agencies we may place first changes of temperature. When rock material is brought to the surface, it is of course, exposed to wide ranges of temperature, the different rates of expansion and contractions possessed by the different minerals tend to loosen the particles and open up cracks in them.

Running water is a very active agent in soil formation, particularly in moving soil from one part of the country to another. As the grains roll on and on, tumble and slide on their downward course each has its cornus worn away, and thus grows smaller, and is contributing its portion of soil to be carried to the sea. Waves have a great power in washing away soil and rock and depositing it elsewhere. All rocks are porous, more or less, rain-water getting into these holes, and cavities and freezing there has a tendency to break off large blocks. (for water upon freezing expands with great force). Glaciers are great moving masses of ice, which have a great grinding and transporting power. During the glacial era a vast sheet of ice overran two thirds of North America, advancing southward to Northern Pennsylvania, Ohio, to the rocky mountains. When the ice front remained at one place long enough the broken and worn fragments of rock, brought along by the ice, were unloaded there as the ice melted, and great irregular ridges were formed, sometimes several miles wide, and from 200 to 400 feet thick. These usually form productive soils, which are not stratified.

The growth of roots of plants into the soil has a tendency to loosen it up and thus allow the air and water to enter more freely. This causes chemical activity to be increased. The decaying of the roots likewise add organic matter to the soil and help to enrich and fertilize it. Animals burrowing into the earth allow the air to enter to considerable depth and also bring much of the under soil to the surface. Earth worms have contributed much to fertile soil formation. Their method of action is as follows:—in moving through the soil they eat a narrow hole, swallowing the soil, when the point of the head is held fast in this excavation while a portion of the sophagus is drawn forward, forcing the checks out in all directions, thus crowding the soil aside; then more dirt is eaten and the process is repeated. After being ground up in the gizzard and the organic matter associated with it digested, it is passed from the body. Chas. Darwin came to the conclusion that earth worms in many part of England pass more than ten tons of earth per acre through their bodies annually. This work is not confined to England for, go out wherever you will, their work may be seen after a rainstorm in little fresh piles of earth upon the surface of the soil.

Water as a liquid carries all sizes and weights of particles. The size of

particles carried varies as the sixth power of velocity of flow and square of diameter of particles. The sorting action of water is very great, so that as the velocity of the stream decreases, the larger particles settle to the bottom first, then as the stream gradually slows down smaller and smaller particles settle until by the time standing water is reached, the finest of clay particles settle.

The organic matter in the soil is a great factor not only in supplying available plant food, but also, in improving the physical condition of the soil thus rendering it better fitted for plants to grow in.

The sources of plant food in soils may be either plants or animals. Plants decay in the soil, thus giving back to the soil the elements which the plant has taken from it, in addition to adding humus. The conditions favoring decay of plants are a warm moist soil, and atmosphere. The process by means of which decomposition takes place is one in which the carbon of the plant unites with the oxygen of the air, forming carbon-dioxygen, which escapes into the air. Humus is the result, as well as acids and gases.

The amount of humus in peat and marsh lands in many cases rises above 20 per cent. In ordinary cultivated lands it rarely exceeds about 5 per cent, and very commonly falls below three per cent, even in humid regions. In properly arid soils we find a much lower average, rarely exceeding 10 per cent, and frequently falling to 3 per cent. Meadow and woodlands generally show the highest humus content in their surface soils. Plants derive their chief sources of nitrogen from the humus in the soil.

The average per cent of humus and its nitrogen constituents in various regions is as follows:

	Hydrogen	Nitrogen
Arid Uplands	.91	15.23
Sub-irrigated		
arid lands	1.06	8.38
Humid lands	7.01	3.78

It thus appears that on the average, the humus in the arid soils contain three and onehalf times as much nitrogen as that in the humid soils. In Russia the humus content and its nitrogen was tested down to the depth of twelve feet with the following results:

	Humus	Nitrogen
1	1.21	5.30
2	1.16	4.32
5	.74	2.16
7	.47	1.54
12	.44	1.15

The physical effects of humus on the soil is to darken its color, to make it more easily worked, to make it lighter so that air and water can penetrate it more readily, to make it warmer and in that way to cause plants to grow it more easily. It improves the tilth and granulation in this, the texture is better. It increases its water holding power. Its chemical action is increased in that it contains a great deal of carbon dioxide and other acids, which are great solvents and help to dissolve the mineral plant foods found in the soil and thus make them available to plants. It also carries a large percentage of plant food itself and is thus very useful to plants, particularly for its nitrogen content.

Show us a man who thinks he knows it all, and we can show you a moving picture of a big mistake.



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# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region

OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE

VOLUME XII; No. 5

LEHI AND SALT LAKE CITY, UTAH

SEPTEMBER 4, 1915

## Farmers Travel 1000 Miles In Automobiles to Study Better Methods of Farming

A PARTY of forty seven prominent Sevier County farmers have made a trip in ten automobiles from Richfield, Sevier County, to Logan and surrounding towns in Cache County. Had traveled almost a thousand miles in autos when they returned to their homes.

The purpose of the trip was to visit all the larger farms and dairies; cattle, sheep and hog ranches. An educational trip to study the best methods so that they can get the best results from their farms and in the most profitable manner.

This party of farmers were directed on their trip through the state by John T. Caine III of the Utah Agricultural College. The origin and inception of the trip was worked out by Lorin A. Merrill, county farm demonstrator for Sevier County. At different places along the trip the farmers were accompanied by experts from the Agricultural College, Lorin A. Merrill, Ben R. Eldredge, Dr. Geo. R. Hill and others.

They left Richfield August 23rd and were known wherever they went because of the large banners on either side of their autos. "Sevier County Farmers."

The first stop was made at Ephraim, where the canning factory, the creamery and Olson Bros.' Herefords were inspected. Tuesday morning the dry farms, which have made Nephi and vicinity famous, and the U. A. C. experiment farm were visited. At Santaquin the water measuring and distributing device, designed by L. M. Windsor of the A. C. irrigation department and installed under the direction of Demonstrator Ballantyne, was in-

spected and note taken of the saving of water resulting from its use. At Payson, Ellsworth's Duroc Jerseys and Dixon's herd of Herefords were viewed, and at Springville the state fish hatchery was the point of special interest. On arriving at Provo the state mental hospital's herd of Jersey

which lifts a great canal of water 99 feet from Utah Lake to foot of the hills. Returning to Lehi they stopped long enough to have their photo taken in front of the Utah Farmer office as shown in this picture.

In Salt Lake County they visited Allen's sheep sheds and Percherons,

on the west side of Cache Valley. Then they went to Box Elder County. Visited at Fielding, Tremonton and Corinne and Brigham City. They arrived home Thursday September 2nd.

This journey is sure to be profitable to them, the time was well spent. Their neighbors should profit from

the results obtained by these progressive farmers. There is no doubt but what this trip will be followed by other farmers in other counties.

The members of the party were: John T. Caine III, Logan; Lorin A. Merrill, Joseph H. Erickson, R. D. Young, A. R. Hawley, Dan P. Jensen, Byron Jensen, Arthur Henrie, Chariton Seegmiller, Charles Wilson, Peter Nielsen, Hans Christensen, Hans Borg, Thomas Ogden, Joseph Ogden, William Ogden, Junius F. Ogden, Wm. T. Ogden, Frank Ogden, Walter Ogden, of Richfield; J. E. Magleby, Alma

Magleby, Jacob Magleby, Milton Magleby, Dr. Cecil Clark, Mayor Austin Yergeson, Joseph Jorgenson, George E. Christiansen, of Monroe; John B. Hansen, Henry C. Larsen, Bishop J. L. Staples, Christo Hydahl, of Elsinore; C. W. Cowley, Bishop J. C. Cowley, Frank Cowley, of Venice; Henry Peterson, of Glenwood; Parley Sorensen, Willard R. Johnson, John F. Curtis, Le. Grande Durfew, of Aurora; J. W. Parker, John A. Parker, Bishop A. Christensen, John Murray of Joseph; Rullen Magleby, Richfield.

### CACHE COUNTY FARMERS.

A short time ago about forty members of the Richmond Industrial Club in seven automobiles made a (Continued on page twelve)



THE SEVIER COUNTY FARMERS IN FRONT OF THE UTAH FARMER OFFICE AT LEHI, UTAH.

cattle, Berkshire hogs and the farming and gardening conducted by the institution.

A. O. Smoot's herd of Jerseys was inspected, and a visit was made to L. N. Hinckley's farm, west of the city, where a 15-acre field of sweet clover is grown on alkali soil heretofore worthless.

Stopped at Provo over night and the next morning visited Cherry Hill Dairy Farm where 40 cows are kept. At Pleasant Grove visited fruit farm of R. D. Wadley. Visited Chipman's corn field and silo at American Fork. At Lehi they went to the great pumping plant at head of Jordan which supplies Salt Lake County with 700 second feet of water. Visited the Utah Lake Irrigation Co's. pumping plant

Pearson potato farm. Smith Bros., Hamilton Bros. and Winder's dairy farms. At Kaysville the mills and elevators. At Ogden the state schools, canning factories and dairy farms. At Brigham City, fruit farms and small pumping plants.

When at Logan considerable time was spent at the Agricultural College looking over the barns, cattle, silos, etc. and learned what the school was doing for the state. Saturday night a banquet was given in their honor at the Agricultural College. They visited the Experiment Station farm at Greenville. Dairies, stock farms and milk condensers at Richmond. They saw the beet fields, fine cattle and dairies at Lewiston, Hyde Park and Smithfield. The dry-farming section



# How The Farmer May Use The Thermometer

By Alfred H. Thiessen, U. S. Weather Bureau, Salt Lake City, Utah.

Scientific farming is no longer confined to experiment stations and the farms of the rich where professional services are employed, but due to the extension of the work of the agricultural colleges and the activities of the Department of Agriculture, scientific farming is now practiced to a greater or less degree on all farms. By scientific farming we mean simply the application of exact methods and principles which have been proved by experiment to be the best.

## Importance of Knowing the Temperature.

How much depends on the temperature! It is the most important element of the weather for us to know accurately. Our comfort depends more upon how the thermometer stands than upon any other single factor. Chemical changes are going on about us at all times, and, as a rule, take place more rapidly the warmer the substances are. Note, for instance the rapid rotting of fruit, the souring of milk, and decomposition in general when temperatures are high. Note the health and vigor one has in cool, crisp weather. Cold air has a tonic effect, and all should learn the right temperature of the air for work, study, or play to get the most out of all three.

## The Thermometer.

Let us examine the thermometer, learn how it was developed, and how it is made. We shall then become better acquainted with it and handle and use it with greater assurance; afterwards we shall show how it may be used on the farm.

## Early History.

The earliest form of a "heat measure," which is a literal translation of the Greek word "thermometer," was made about 1592 by Galileo and was an air thermometer (see fig. 7). It consisted of a glass tube B opening into a glass globe A. Some water was first poured into the globe, and the tube was then inverted with its open end submerged in a vessel of water, as shown in the figure. This instrument was not constructed for the purpose of showing exact degrees of heat, but was used by physicians (Sanctorius, about 1624) to indicate the higher temperature of fever patients over that of persons in normal

health. The operation of the instrument is as follows: When the bulb is grasped, the top of the liquid at D is depressed, and the more according to the intensity of the fever. The warmth of the hand is communicated to the air in the bulb, which expands, forces the liquid out of the tube B into the vessel C.

This first form of a thermometer has the great objection in that it is not easily handled, and that it is subject to changes due to difference in air pressure which are constantly occurring, and to the diminishing volume of water due to evaporation.

The next important form in the evolution of the thermometer is shown in figure 8. It is like the thermometer in present use, except that the stem is open at the top. This form has a great advantage over the first form in that it is less affected by air pressure, but of course, has other decided defects.

The first thermometer was made by Galileo in 1592; he and his students and others improved upon his first two forms, shown in figures 7 and 8, until finally, in 1641, the instrument used by the Florentines had attained a form in all its essentials like the modern thermometer (see fig. 9).

## Principle of the Thermometer.

All ordinary thermometers work upon the principle of the expansion of substances with heat, and gases, liquids, or solids may be used. In the ordinary instruments, accurately described as liquid-in-glass thermometers, the differences of heat indicated depend upon the condition that the glass container and the liquid used expands differently with the application of the same amount of heat to both. If glass expanded with heat and contracted with cold to the same degree as the liquid, then the latter would always stay at the same level, no matter how the temperature changed. Glass, however, expands to a lesser degree than do the liquids used; hence the fall of the liquid column when the air becomes cooler and the rise when warmer.

## Making a Thermometer.

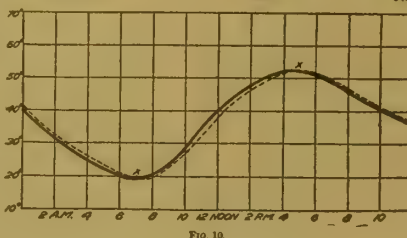
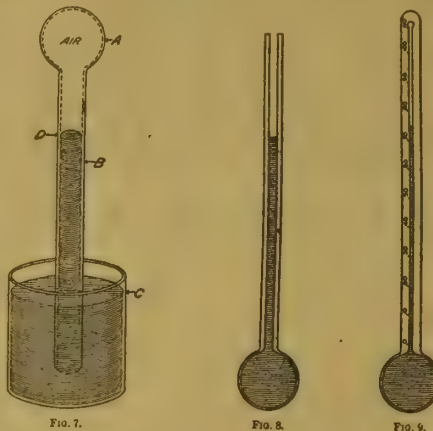
The best of the earliest thermometers were made by expert glass blowers of Florence, Italy, and were much superior to those made in England, where unsealed thermometers, or those similar to figure 8, were in common use previous to 1740, when they were replaced by the Fahrenheit instrument.

The making of the best modern thermometers is an interesting process. The glass is specially selected and blown by an expert workman, who first makes the tube and, after examining its bore to determine its size, attaches the bulb. The determination of the size of the bore is very necessary, as the size of the bulb must bear a certain relation to it. The tubes are then filled with a thermometric substance, usually mercury or alcohol, both of which must be chemically pure. After the thermometers are filled and sealed, they are laid away to season; for it has been found that glass, after being subject to high temperatures, shrinks somewhat. The shrinking process

continues about two years, although most of it takes place in one year. After the seasoning process they are ready to receive the degree marks. Some Facts Regarding Thermometers There are four essential parts to a thermometer—tube, bulb, liquid, and scale.

The tube should have as uniform a bore as possible; otherwise the degree marks would not indicate the correct temperatures, except at the test points.

The size of the bulb should bear a certain fixed relation to that of the tube, and must be large enough to produce a scale of sufficient size. To illustrate this: Suppose we consider two thermometers with bulbs of dif-



ferent sizes, but with tubes of the same size. It is evident that when subjected both thermometers to the same additional amount of heat the mercury will rise higher in the tube having the larger bulb. The workman makes his bulb of such size as will fit the stem. A good length of thermometer for ordinary use is 10 or 12 inches.

The selection of a suitable liquid is very important. Either mercury or alcohol is generally used. It may be observed that the liquid in some thermometers is wine color; in such cases the liquid used is alcohol colored with a dye, which after long use may settle to the bulb end, leaving the top of the column quite colorless. The essentials in the choice of liquids are that expansion of the liquid be much greater than the glass, that it shall not distill in the upper part of the stem, that its surface tension be small, and that it shall have low specific gravity.

## The Thermometer Scale.

In the construction of a thermometer the scale is made last and after the seasoning process. In the best thermometers the scale is etched on the glass stem; for if a separate metal scale is used errors may occur by the slipping of the metal scale in reference to the glass stem. There are three scales in common use: the Fahrenheit, the centigrade, and the Reaumur. The freezing point on the Fahrenheit scale is at 32 degrees and boiling point at 212 degrees; there are, then, 180 whole steps between freezing and the boiling point on this scale. A scale of 100 parts was invented by Celsius, but the order of numeration, 0-100, which is the pres-

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ent centigrade scale, was adopted and recommended by another; its zero is at the freezing point, and the boiling point is marked 100 degrees. The third scale, the Reaumur, has its freezing point at 0 degrees and the boiling point at 80 degrees.

The centigrade scale is used the world over for scientific purposes! The Reaumur is still employed for domestic uses in several countries. The Fahrenheit scale is used quite generally by English-speaking people.

## How to Expose a Thermometer.

Now that we understand to some extent the theory of thermometers and how they are made, let us turn our attention to how they should be exposed.

In the first place, no matter how exposed, a thermometer simply tells its own temperature. It will indicate the temperature of gases, liquids, and solids, by being immersed in them, but with varying degrees of error, depending on how well the instrument is exposed and on other factors. In most cases a thermometer hung in the free air will not give the actual temperature of the air, because it is subject to the direct rays of the sun, and because radiation from the thermometer can take place unimpeded. Probably the best way to expose a thermometer in order to determine the temperature of the air is to hang it in a shelter so made that air may blow freely through it, and then whirl the instrument before a reading is taken. The same conditions may be obtained by rapidly whirling the thermometer in any outdoor shade. It is especially difficult to obtain the exact temperature of gases, even though their temperatures remain stationary. Another difficulty comes in when the temperature of the medium to be measured is constantly varying, as does that of the air.

It is obvious that it will take a certain length of time before a thermometer will indicate the temperature of a medium to within a degree, and still longer to indicate the temperature to within a tenth, when the temperature of the medium is constant. When the temperature of the medium is continually changing, the thermometer seldom indicates the correct temperature; but it may be reasonably close, depending on the sensibility of the instrument, the exposure, and the rapidity with which the temperature is changing.

If exposed in the air the thermometer will endeavor to follow changes in the air temperature, but it can not record such changes instantly. The heavy line in figure 10 indicates the real temperature of the air, the broken line the indication of the thermometer. It is seen that the thermometer is always lagging behind the air temperature, except that when the temperature changes abruptly there may be a crossing, as at X, when

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the thermometer indicates the temperature of the air at that instant.

Everyone has noticed the great difference between the temperatures of stones in the sun and others in the shade. Those in the sun seem much hotter than the air, while those in the shade seem much colder. Now, a thermometer, like the stones, is constantly receiving heat by radiation from surrounding objects and emitting heat by radiation from itself. The correct way, then, to measure the temperature of the air is to employ some means by which these radiating effects may be overcome, and that is by hanging the thermometer in a shelter, as explained above.

#### Uses of Thermometer on the Farm.

In the farm home this instrument will often tell a very important story. In the first place, it should be exposed correctly. If placed on a wall, it is subject to all kinds of currents of air that may be rising or falling at that place, and may indicate something quite different than the average temperature of the room. When practicable it should be hung in the middle of the room, from the ceiling, about 4 or 5 feet from the floor. If one were to explore one's living room with a thermometer, many unlooked-for differences in temperature would be found. The air near the floor would be much cooler than that near the ceiling, and the temperature would also vary at the same level in the various parts of a room. In a sick room, where greater accuracy may be required, it may be necessary to hang the thermometer on a level with the patient's head.

Testing the bath water is another important use in the home, especially in the case of children or invalids. For a cool bath the water should be from 60 degrees to 70 degrees, tepid bath from 84 degrees to 88 degrees, a normal bath about 98 degrees, and a hot bath should be over 100 degrees F.

Knowledge of the temperature of the pantry and cellar is important, for by investigating them one may make improvements in conditions. Putrefaction will start at 50 degrees, so that a pantry or closet where food is kept should have a temperature at least as low as that. Cellars where canned goods are stored should have a temperature of 32 degrees or over. Apples are frequently stored in outside cellars, where the temperature should be kept at 31 degrees or 32 degrees; but apples may be kept satisfactorily at 34 degrees or 36 degrees. When stored at the higher temperatures, the fruit should be placed there soon after being picked.

#### Candy Making and Cooking.

A favorite pastime with the young women on the farm is candy making. There is no branch of cooking in which temperatures are more important than in making candy. For this purpose special instruments are made. No one can follow a good recipe for any kind of candy and ignore the temperature.

Thermometers are also made so that the bulb may be permanently inserted in stove ovens and the scale read conveniently on the outside. With the use of such a thermometer the housewife may be sure of the temperature; and since cooking is a chemical process which quickens with the increase of heat, it is highly important for successful and uniform cooking to know and to have the oven at the right temperature.

#### In The Dairy

A thermometer should be the constant companion of the dairyman. There is probably no other department of the farm in which a thermometer can be used to greater advantage than in connection with dairy operations. The temperatures at which milk, cream, and butter are kept, and at which the various operations of butter are carried on, are very important.

When milk is to be sold as such, it should be immediately cooled. The reason for this is to stop the increase of bacteria as much as possible. It has been found that an increase of 14 degrees in the temperature of milk will increase the bacteria 600 per cent, and that bacteria will reproduce themselves every half hour if the temperatures are favorable.

If milk is to be separated by a centrifugal process, it should have a temperature of 90 degrees or 92 degrees, and should be separated preferably right after milking, and then cooled. If milk is to be separated by gravity methods, it should be cooled to 50 degrees very soon after milking.

The temperature at which cream is churned is another important item, and success depends largely on this factor; 52 degrees to 62 degrees Fahrenheit is considered about right. And, lastly, butter should be stored in a cool place to insure its remaining sweet.

#### In The Incubator.

The incubator is now frequently found on farms, and the importance of maintaining correct temperatures in them need not be emphasized. The correct temperature is 103 degrees and should not go lower than that, especially during the first six days. To insure almost absolute success, in so far as maintaining the correct temperature, one may use the electric alarm which rings a bell when the temperature reaches 105 degrees or falls lower than 103 degrees. This instrument will not only aid greatly in attaining success with the hatch, but also diminish the worry and attention.

#### Outside Uses.

It is sometimes desirable before planting to test the temperature of the ground. The experience of every farmer has taught him that every species of seed has a minimum temperature below which it will not germinate. There also appears to be an upper limit. One may plant in too high a temperature, but success under this condition is dependable largely on the moisture content of the soil.

#### In The Orchard.

Much has been written regarding the uses of thermometers in the orchard at frost time, but they may be applied to all crops that are injured by early or late frosts, such as tomatoes and late onions. Some means of protection may be applied to them all.

The farmer should first know his farm. He should know what places are colder than others. He may not wish, nor is it necessary, to have a thermometer for every little hill and hollow, but he should by actual test find out the cold and the more favorable places. A knowledge of this kind will help the farmer not only in protecting his fruit and other crops, but also in planting. There should be a regular station somewhere convenient on the outside where a thermometer can be exposed. Knowing how other places on the farm compare with the regular station, the farmer may, by reading his station thermometer,

estimate the temperature at any place on his land fairly accurately.

#### Occasional Uses.

The clinical or fever thermometer may be found very useful on the farm. The condition of a patient may be the more intelligently reported by telephone or messenger to the attending physician. The temperature of a person in normal health is 98.6 degrees.

The following are the normal temperatures of farm animals: Swine, 104 degrees; goats or sheep, 102 degrees to 103 degrees; cows, 101 degrees to 102 degrees; horses, 99 degrees to 99.6 degrees; dogs, 99 degrees to 100 degrees. A rise of one or two degrees is unimportant if temporary; but if permanent it indicates a serious condition which needs attention. A rise of 10 degrees to 12 degrees in animals is usually fatal. One may wish to report the temperature of a sick animal together with other

symptoms to a veterinary, and the exact fever condition can only be obtained with the use of a good clinical thermometer, which should be used in accordance with veterinary methods.

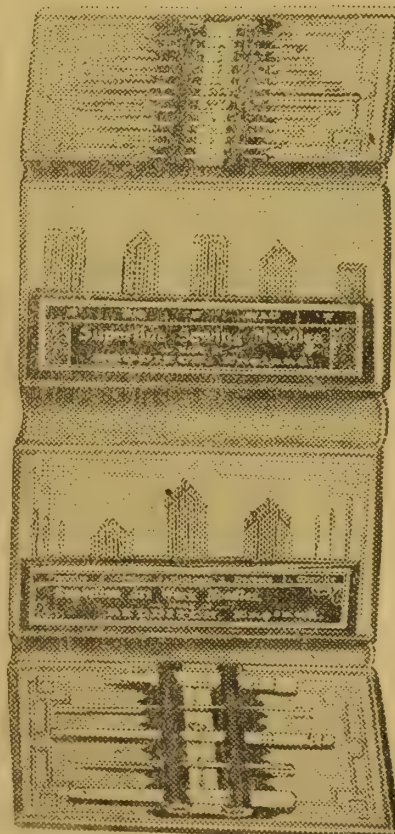
#### Thermometer Suggestions.

When buying a thermometer, select one which bears the name of the maker and with the scale etched on the glass stem, although one so made is usually more expensive than one with a metal scale. Further, in choosing a thermometer one should have in mind the use for which it is intended. There are thermometers for all uses—cooking, dairying for outside, and so on.

With constant use one becomes acquainted with the instrument, so that dependence will be placed upon it; and with constant use uniform success in operations conditioned on temperature will be the reward.

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# More About Official Testing

By Ben R. Eldredge.

If you have decided that you have a good cow that is worth the attention required to place her in the Register of Merit or Advance Register then it will be alright to prepare for the test.

In the first place, she must be a registered cow. She should be in good condition, and the best plan is to test her for one year and anyone who understands cattle at all will realize the importance of having a cow in good physical condition— which means perfect bodily health and fair flesh. Then, application should be made to the Secretary of the Breed Association. I will here give the names of the secretaries of the different associations:

Ayrshire.....C. M. Winslow, Brandon, Vt.  
Brown Swiss.....Ira Inman, Beloit, Wis.  
Guernsey.....Wm. H. Caldwell, Peterboro, N. H.  
Jersey.....R. M. Gow, 324 West 23rd St., New York City.  
Holstein.....Supt., M. H. Gardner, Delavan, Wis.

An application will bring a number of blanks for entry. The blanks should be properly filled out and returned when the Secretary or Superintendent will notify the Agricultural College who will at once take up the matter of appointing the supervisor for the test. The expense will be in the payment for the supervision and in many instances it will not cost much more to supervise the test of five or six cows than for the test of one; so in the case of herds it is best to have the cows in shape so that up to six at least can be tested at one time. The expense of supervision may vary from \$3 to \$5 a day. This must be paid, not to the supervisor, but to the Agricultural College. An arrangement can be made with the owner and the supervisor for a certain time for beginning the test, then once each month, the supervisor will come and for two days take weighings, samples and make tests of the milk and file a report with the Agricultural College, where it will be checked, certified to and forwarded to the headquarters of the Breed Association. At the end of the year, if requirements have been satisfactory, a certificate of official test will be issued for which a small fee must be paid. The requirements for admission to the Advance Registry of the Breed Associations as adopted in 1913 are as follows: If it is possible that recent changes may have been made in some of these requirements).

no increase in requirements for any breed after a cow is five years old except in the case of the Brown Swiss where six years is fixed as the full age form. The details of conducting the test may vary some according to the regulations of the different Breed Associations.

The following are the Jersey Cattle Club rules governing supervisors of tests: It will, in a general way, give an idea of what is required of supervisors. We have not room to give the rules of all of the breed associations.

## Rules Governing Supervisors of Tests.

**Identity and Condition of Cow.—1.** The supervisor should as far as possible satisfy himself as to the identity of the cow under test; he should note upon his report form an sickness of a cow or other condition likely to affect the reliability of a test; he should also report any irregularity or suspicious occurrence, and in all ways endeavor to conduct a fair test.

**Rules Must Be Followed.—2.** The supervisor is not at liberty to decide as to which stipulations contained herein are essential and which are not, but is required to observe these directions in all details.

**Seeing Cow Milked.—3.** The supervisor shall be present at and throughout each and every milking during the entire test period of two days in each month during the test year. In case of tests for shorter periods than one year he shall be present at each and every milking during the continuance of the test.

Under no circumstances shall more than one cow undergoing test be milked at the same time, and the supervisor must in every case be in position to observe the milker during the whole milking.

**Weighing Milk.—4.** The supervisor shall assure himself as to the accuracy of the scales used, and they should be graduated to pounds and tenths. He shall weigh the empty milk-pail before each milking, and after milking he shall satisfy himself that the pail contains nothing but the milk drawn from the cow under test; he shall take charge of the pail and its contents, weigh the milk given at each milking immediately after it is milked, and record the exact weight of the milk on the blank form provided for that purpose.

**Sampling Milk.—5.** The supervisor shall take a sample of the milk of each milking for determination of

the whole. Such samples must always be securely retained under the absolute control of the supervisor, under lock and key if necessary, until tested, and the testing shall be proceeded with as soon as convenient after the samples have cooled to ordinary room temperature.

**Applying The Babcock Test.—6.** The supervisor shall apply the Babcock test to the milk of every milking during the test period of two days in each month during the test year, making a separate test of each milking. In the case of tests for shorter periods than one year he shall make a separate test of each milking during the continuance of the test. He shall determine the percentage of butter-fat in each sample, placing the required amount of milk from the sample in at least two test bottles for that purpose, recording the readings of both bottles. Should the reading of such butter-fat show a greater variation than two-tenths of one per cent between two bottles, the supervisor shall make another determination of the percentage of butter-fat by two test bottles to correct the previous one. If the variation between the two determinations is two-tenths of one per cent, the supervisor shall take the mean between the two decimal fractions as the percentage of butter-fat upon which he shall calculate the total fat in such milk. Readings of test bottles should be made when at a temperature of about 130 degrees F. The supervisor shall record in ink the total amount of butter-fat shown by the Babcock test to have been contained in the milk of each milking.

**Determining Fat Percentage.—7.** The average percentage of fat shall be determined by dividing the total yield of fat shown by the tests by the total amount of the milk tested. Fat percentages must be carried out to at least three decimal degrees.

**Retesting.—8.** (a) if in the supervision of any test the supervisor finds that the yield of fat in any two days after the first month of the test period is in excess of the appropriate amount specified in the following table, he shall inform at once the authority by which he was appointed, so that a retest for two days by another test supervisor shall be made within ten days after the termination of the first test:

Lactation Period	Class I. Cows not over 30 Mos. at start of test.	Class II. Cows over 30 Mos. and under 5 Yrs. at start of test.	Class III. Cows 5 Yrs. or over at start of test.
	Lbs. Fat in Two Days.	Lbs. Fat in Two Days.	Lbs. Fat in Two Days.
1st to 6th month, incl.	3.75	4.75	5.00
7th to 12th Month, incl.	3.00	4.00	4.33

(b) If in the supervision of any test the supervisor finds that the milk averages for the two days above seven per cent butter-fat when it averages thirty pounds or over per day, or above eight per cent when it averages ten pounds or over per day, there shall be a retest as stipulated in Section (a).

**Lost Milk and Lost Samples.—9.** If any or all of the milk of a milking is accidentally lost before weighing, the weight of that which has been lost is to be supplied by taking the weight of the corresponding milking in the test period; and if the sample from any milking is accidentally lost before testing, the missing test is to be obtained by taking the results of



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### ANSWER

The advertisements in this issue either by asking your local dealer for them, if he does not carry them in stock he may send for them, or you can write direct for catalogue and information. Don't forget to mention the Utah Farmer for we are back of every advertisement that appears in our paper.

Age	Ayrshire		Brown Swiss		Guernsey	Holstein	Jersey		
	Year Record		Year Record		Year Record	7-day Record	7-day Record		Year Record
	Lbs. Milk	Lbs. Butter Fat	Lbs. Milk	Lbs. Butter Fat	Lbs. Milk	Lbs. Butter Fat	Lbs. Milk	Lbs. Butter Fat	Lbs. Milk
2 Yrs.	6000	214.3	6000	222.0	250.5	7.2	12.0	14.0	250.5
3 Yrs.	6500	236.0	6420	233.5	287.0	8.8	12.0	14.0	287.0
4 Yrs.	7500	279.0	7288	271.3	323.5	10.4	12.0	14.0	323.5
5 Yrs.	8500	322.0	8145	304.2	360.0	12.0	12.0	14.0	360.0
6 Yrs.			9000	337.0					
Requirements	1.27	.66							
increase	and	.20							
decreased	2.74	.12	2.35	.09	.1	.00139			

The age of a cow is taken at the beginning of a record. In the case of the Guernseys, Jerseys, Ayrshires and Brown Swiss. While in the case of the Holsteins it is taken at the time of the last calving and there is

butter-fat immediately upon weighing of the milk, being careful that the milk is thoroughly mixed by pouring from one pail to another, or by means of a dipper, before taking the sample, to insure that it is a fair sample of



the tests made of the corresponding milking during the test.

For example, if an evening milking is involved, the preceding or succeeding evening milking shall be used. It must be stated on the report form that any data thus obtained are estimated.

**Reports of Supervisors.**—10. The supervisor shall sign his reports, and shall send them promptly, for checking indorsement to the agricultural college, State experiment station, or other institution under whose authority he acts, accompanied by a memorandum of his expenses.

**Payment of Supervisor.**—11. Under no circumstances shall any payment or gratuity to the supervisor be made by or permitted from the owner of the cow or any one interested in her, and any violation hereof shall invalidate the test.

Articles will follow soon on Cow Testing Association. These articles will be prepared by W. E. Meyer, of the Western Dairy Division, U. S. Department of Agriculture.

#### PLANTING TULIP AND NARCISSUS BULBS FOR NEXT SPRING

If you would have rich beds of tulip or give the beds or the corners of your lawns a beautiful spring-like yellow or white glow of narcissus, daffodil and jonquil, you must begin to think of the early spring appearance of your garden in the fall, for the bulbs of these two flowers must be planted in the fall before the ground is frozen. In fact, this work should be undertaken as soon as, or before, an early frost has begun to make the annual flowers in the beds look weakened. In dealing with narcissus, which is the family to which the daffodil and jonquil belong, it might be well to think of trying to naturalize the narcissus to grow and blossom on the lawn much as do the wild flowers. How to plant and handle the bulbs as well as the best method of getting them to become spring residents of grassy corners, are described in the following directions issued by the bulb specialists of the United States Department of Agriculture:

These bulbs should be planted in light, rich soil that has been dug to a depth of at least 10 inches. The tulip bulbs should be set 5 inches apart and 4 inches deep and the narcissus bulbs about 10 inches apart and 5 inches deep.

If they are to be grown in pots or window boxes, light, rich soil should be used. Place 1 to 2 inches of cinders or broken pots in the bottoms of the pots or boxes to insure good drainage. After planting, place the pots or boxes out of doors and cover them with about 4 inches of ashes or sand; or they may be placed in a dark, cool room or cellar for a few weeks until the bulbs have formed a quantity of roots. They may then be brought into the light and heat for flowering. Keep the soil well moistened from time of planting, but avoid overmoistening, for if kept too wet the bulbs will decay.

##### Cultivation.

If planted in beds, the surface of the soil should be loosened after each rain and the bed kept free from weeds. In the late fall or early winter months it is well to cover the beds with a light mulch of straw or leaves to prevent injury to the young roots from the alternate freezing and thawing of the soil. This mulch should be gradually removed in spring, as soon as growth appears above ground. The bulbs are quite

hardy and are not injured by severe cold if the soil is well drained.

##### Lifting and Dividing

Tulip and narcissus plants are perennial, and if given proper care and grown under suitable soil and climatic conditions will increase and multiply from year to year. The bulbs may remain in the ground two or three years, or until the clumps begin to crowd. After blossoming in the spring, from six to eight weeks should elapse to allow the foliage to die partially down, when the bulbs may be lifted from the roots and store the bulbs with a spade or fork. Shake bulbs in a cool, shady place where they will ripen and cure. When the old leaves and roots are thoroughly dry they may be easily rubbed off and the clusters of bulbs divided. The bulbs may then be planted in the same manner as the original bulbs. In this way the stock may be increased in a few years.

##### Naturalizing the Narcissus.

The narcissus often becomes naturalized when planted in the sod or partial shade, where it will continue to grow, blossom, and multiply for many years without further attention. Simply make a small hole in the soil 5 or 6 inches deep, insert the bulb pointed end up, press the soil over the top, and nature will do the rest. For naturalizing, avoid planting in rows or rigid geometrical figures. A good plan is to scatter the bulbs like seed and plant where they fall. This method of planting is extensively followed in the home grounds and parks of England and other countries in Europe. In portions of North Carolina, on large estates along the James River in Virginia, and in old gardens in New England, narcissuses that were planted over half a century ago are still growing vigorously and every spring produce beautiful displays of blossoms.

#### YELLOW LEAVES ON

##### APPLE TREES.

Short Creek, Arizona.

Utah Farmer:

Dear Editor:—We have had some trouble with our young orchard. More especially with apple trees. They seemed to be affected by a fungus disease. The leaves have all turned yellow and have small dark spots scattered over the surface. These trees are all on new land, sandy loam, and the only trees within twenty miles. A little information through the columns of your paper will be appreciated.

Thanking you in advance for same.

WOODRUFF RUST.

Answered by Dr. E. D. Ball.

From the description of your trees it is probably not a disease that is affecting them but some trouble with the soil, yellow foliage is often caused by the presence of ground water too close to the surface. Apples trees especially will not stand water near the surface unless it is pure and moving, stagnant water, particularly where there is any alkali, is quickly fatal to them. If the ground gets to dry during the summer the leaves of a tree will often turn yellow and drop off prematurely but there is a marked difference in appearance between this and the yellow of excess water.

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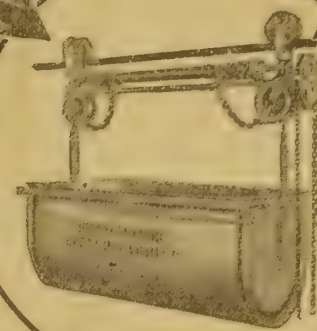
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We believe that every advertisement in this paper is backed by a responsible person. We guarantee the reliability of advertisers, but we will not undertake to adjust trifling differences between subscribers and advertisers. This guarantee holds only when written complaint is made to the publisher within one week from the date of any unsatisfactory transaction, accompanied by proofs of swindle and loss and within one month of the date of the appearance of the alleged deceptive advertisement in the Utah Farmer, and the subscriber must prove that in writing to the advertiser he said: "I saw your advertisement in the Utah Farmer."

#### OFFICIAL ORGAN

Utah Horticultural Society, Utah State Dairymen's Association, Utah State Beekeepers' Association, Bear River Valley Farmers' Protective and Commercial Association, Agricultural College Extension Department and Utah State Fair Association, Utah-Idaho Millers' and Grain Dealers' Association.

When you ask for a change of address always give OLD and new postoffice address.

More and more farmers are becoming interested in dairying. It brings steady or weekly returns. Often helps pay the running expenses of the farm. When the end of the season comes the other crops are used to increase the earning power of the farm.

#### ATTRACTIVE PACKAGES

Honesty in measure, weight and size together with packing will become a great asset to any farmer. Sometimes a little carelessness on the part of the one making the package will spoil the sale for another time. Pleasing to the eye is part of the sale. Often the neatness and attractiveness of a fruit or vegetable will make the sale. Quality should always be maintained.

#### WHEAT FOR NEXT YEAR.

According to a report from the Department of Agriculture fully forty million acres are being plowed now for the sowing of the winter wheat crop. The continued wet weather in the east which has destroyed so much wheat in some sections may discourage the growers and result in a less acreage than was sown to wheat last fall.

Wheat is now selling at a better price than it did a year ago at this time, but the prospects do not look so favorable for an increase in price such as was obtained last fall.

More importance is being given to

the selection of seed, with the idea of increasing the yield next year.

#### HOG CHOLERA REMEDIES.

According to the best authorities there is no such a thing as a cure for hog cholera. For this reason it does not pay any hog owner to fool with these "cures" such as are being sold by agents. The nearest thing that science has come to a cure is the anti-hog cholera serum. This really acts as a preventive and not a cure, but may be used very successfully when the disease is taken in time. It has been demonstrated that there is merit in the serum when properly administered. Don't let any one talk you into so called cholera "cures."

#### ATTEND THE FAIRS.

It will only be a short time until the fair season will be on. A number of County Fairs are going to be held this fall. Go and see what there is on exhibition. Support your local fair, send something for exhibition. Nearly everyone of these fairs are worth going to see. From them you will learn something that will be of value.

The best livestock, and the finest of crops of the field, garden, and orchard, will be on exhibition.

There is another feature about the local fair. You meet other farmers, and discuss with them your problems, and how they have succeeded.

Fairs have done much to improve the livestock and farming methods. Having seen the County Fairs, you will want to attend the State Fair, for here will be assembled the best of the good things of the state. You will be able to spend a day or two studying the exhibits, and the educational features.

#### WITH OUR READERS

Each daily mail brings to us letters, that are really a pleasure. They contain words of cheer and encouragement. This all goes to show that the Utah Farmer is a real farm paper and is serving its readers in a helpful way. Many of our readers are renewing their subscriptions, which we appreciate very much. Some of our friends have forgotten to send in their remittance but we know this is because they are so busy at the present time. We want to keep all our old friends and make as many new ones as possible during the coming few months. We certainly appreciate the loyalty and good will of our readers. A subscriber from the southern part of the state writes: "I like the Utah Farmer because it is clean reading and I can trust it in the hand of my boys and girls." Another readers writes: "I have taken the Farmer since it was first published and do not see how I could get along without it."

There may be some who do not agree with what we would like to see

some changes, we earnestly ask any one like this to write us and give their views. If the difficulty can be overcome we are only too willing to try.

Tell your neighbors about the Utah Farmer, ask them to join the family circle. Say! before you forget it send that renewal along with your neighbor's name. It will encourage us to work just a little harder each week for you.

#### OUR TOWN.

The greatest obstacle to progress in most small towns is the self appointed critic who merely "knocks" has neither the spirit nor the sense to boost.

It is a pity that we cannot pass a law to muzzle these knockers. They talk or do anything to oppose any progressive movement. If the town wants a water system he is the first one against it.

There must and should be doubters, to act as a balance wheel; they are different from the knocker as they can be converted, all they need is to be shown. But the knocker is an obstacle and very seldom can he be changed.

There certainly is pleasure in saying "Our town," "Our pretty homes," "Our fine farms" "Our progressive merchants." If we really believed these expressions we would do a little different.

Don't be afraid of helping your neighbors to do or accomplish something that will bring him public recognition or even some profit.

Convert yourself that you have the best town (or else move away) and then go out and boost for it. Work together for community progress. Help the other fellow and in so doing help yourself.

Support your "own town" by trading at home whenever possible. Boost for it. Help to make it the city it should be and then you can truly say "Our town."

#### ABOUT WIDTH OF ROADS.

Just at this time many are interested in the question, how wide should our public roads be? A number of things should be considered in answering this question. The kind of material to be used in making the road. The topographical conditions through which the road will pass, the proper drainage of the road. The special use to which the road may be put, if any.

For years very little attention has been given to the waste of land in our road building. Land has been cheap and plentiful and years ago we did not give the attention to proper road building as we do now.

Public roads have been of a uniform width 66 feet and the by-roads about 40 feet. They have been too wide if we were to judge by the condition in which we find many of them. Wasted

land on either side never used only to grow weeds.

Why not make them the width that is used and plant trees on either side as we have advocated in these columns before. Then the thousands of acres of land that are now practically wasted could be put to some good use.

Some of the eastern railroads are teaching us a lesson in this regard for they are farming their right-of way. On a recent trip east I saw great long stretches of land on either side of the railroad track planted to alfalfa. Acres were planted to truck gardening. I understand similar conditions are to be found in some parts of California.

For the sake of economy in building and upkeep let's build our roads more narrow. Restore the acres of valuable land to farming. Build scientifically constructed roads the proper width and plant trees on both sides.

#### THRIFT SHOULD BE TAUGHT.

To be frugal, to study economy, to become a good husbandman, and to be careful should be taught in our homes and in our schools.

If we once were a thrifty nation it is not a prevailing virtue of today. Something should be done to arouse people to a greater individual thrift. It is defined as something more than just saving. It means also earning, working, planning and increasing, as well as conserving, for upon individual thrift the prosperity of the whole nation ultimately depends.

We can boast as a nation of knowing how to make money but we can not say anything about our ability to spend it. The greater ability is in knowing the value of money and how to properly use it. Thrift is not an affair of the pocket, but an affair of character. Thrift is not niggardliness, but wisdom. Thrift is not so much a matter of money as an attitude of mind.

How much of our money is spent in senseless pleasure and vice. A certain amount of pleasure is needed by all classes; there can not be efficient work where there is no play, but there is no doubt that we spend much money which not only cannot be described as sane pleasure, but which does positive physical and moral harm.

Thrift does not simply mean that one shall deny himself food and clothing—no, the thriftier he is the more money he and his family will have for these purposes. Thrift aims at cutting out the useless and senseless expenditures that there may be more money for the things that are sensible and useful, and thereby make for a better people and government. You can not have national thrift until you have community thrift, and you can not have community thrift until you have individual thrift.



**E. W. Patrick**  
Marion Hotel  
Ogden, Utah



## Lightning Rods

Ten questions and answers by the Weather Bureau of Washington D. C.

(1) Do lightning rods really protect buildings? Answer: Yes; but the rods must be of proper character, properly installed, and properly grounded in relatively moist earth. Periodical inspection and maintenance in good condition are indispensable to efficient protection.

(2) Do lightning rods on a building increase the danger of its being struck? Answer: Opinion is divided; but a properly roded house may be struck several times without injury, whereas a single stroke without the protection afforded by the rods may cause disaster.

(3) Should lightning rods be put up with or without insulators? Answer: Without. Buildings with metal roofs, or wherein any metal construction employed is properly connected to earth, are already partly provided with lightning protection. If rods are added to such buildings the rods should be put in direct metallic connection with the roof and other metal work about the buildings wherever practicable. All down spouts should be led into metal pipes going into the earth to give the proper earth connection, or the spouts should otherwise be well grounded by use of wires or cables. Insulators are entirely unnecessary, and it is proper to have extended metal work in buildings, like

heating and water pipes, all electrically connected together and all well grounded. This latter result is gained incidentally through connections made to water pipes, since the latter usually pass through the earth outside the building.

(4) Are gilded or otherwise expensive points of platinum or special metal or of fanciful construction necessary? Answer: No; not in the least. Sharp needlelike points are effective in dissipating small sustained electrical charges, but such electrical manifestations are perfectly harmless. The imagined superiority of such fanciful points is utterly valueless when the rod is struck by a real lightning flash. The useful qualities lightning rod points must possess are infusibility, mechanical strength and security of installation, and permanence and durability under prolonged exposure to the weather. Stout bluntly pointed iron rods three-eighths or one-half inch in diameter rigidly and securely fastened so as to project 1½ or 2 feet above the structure to which they are attached satisfy all the requirements.

(5) What material is best for conductors or rods?

This question can not be answered fairly in a single statement.

Because of its availability and cheapness, as well as its electrical properties, iron is one of the best materials for rods. Iron, however, rusts and deteriorates under prolonged exposure to the weather. This is only partly overcome by galvanizing; hence galvanized-iron lightning rods should be of ample size (not less than one-quarter inch in diameter) carefully installed and subjected to systematic inspection and repair.

Two-strand cable galvanized-iron fence wire of substantial size of the same style as barbed wire but without barbs furnishes a very good material for cheap iron lightning rods. The presence of the barbs constitutes a rather serious inconvenience in handling and installing such a conductor, and no material benefit is derived from their presence.

Copper is better than iron not only on account of its indestructibility but also because of its softness and pliability, which make it easy to install. Scientists are not in accord in regard to the relative merits of the electrical properties of copper and iron, but in any case questions of cost, durability and the like far outweigh minor differences in electrical properties.

Aluminum is a competitor for iron and copper for lightning rods. Its durability under exposure to weather is in its favor, but its fusibility makes it inferior to iron for points.

If low first cost is the controlling factor, galvanized-iron rods must be chosen, but subsequent inspections must be made and repairs may become necessary.

If higher first cost is not an obstacle, the choice should go to copper first or possibly aluminum.

(6) Should lightning conductors be made in the form of solid rods, flat bars or bands, stranded twisted cables, woven stranded ribbons, or hollow twisted cables? Answer: Any of the forms may properly be employed, or two or more forms may be employed in combination. Conductors should be put up in long continuous

pieces as far as possible. Solid round wires one-quarter to one-half inch in diameter are best for this purpose. Conductors of a size larger than one-fourth inch, however, present difficulties in handling and installation if the rods are solid. It then becomes better to use stranded cables and other similar forms. Long continuous lengths, ample cross sections combined with flexibility, and the ease of its installation over crooked courses render stranded cables, in general, better than any other form of conductor available.

Substantial iron points in combination with copper cables from five-sixteenths inch in diameter, for small farm buildings, to one-half inch in diameter, for large important structures, form one of the best possible systems of conductors for lightning-rod construction.

There is no good reason for purchasing other fanciful forms of cable at materially greater prices per pound than are asked for standard makes of cable of approximately the same cross section.

(7) Must lightning rods be connected to the earth? Answer: Yes; by all means, and most effectively. Just a few operators in the lightning-rod profession have sought to impose upon the uninformed a system of ungrounded lightning rods. Such rods are a menace instead of a protection. It is impracticable to fully discuss here methods of making connections to earth. In general terms the conductor should be carried down into the earth away from the building in a trench or other excavation, so as to reach the embed the conductor itself or plates attached thereto into permanently moist earth. Connections with water pipes or other metal work itself connected to earth constitute good grounds.

(8) Are Government buildings provided with lightning rods? Answer: Yes; many of them, but naturally not every one.

(9) Does the Government use the material or the rods or the system of any particular agency? Answer: No; there is nothing mysterious or exceptional about lightning rods, the material of which they are composed, or their construction and installation. Suspicion may well be aroused as to the reliability of those making extravagant claims of superiority for their particular wares to the exclusion of others.

(10) What is the best arrangement of rods on a building? Answer: A

rounded by and inclosed beneath a building completely screened and surcage or network of substantial metallic conductors, all properly interconnected and joined to the earth,

## "Pectin" Makes Jelly Jell---It's Not the Sugar

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There is little Pectin in fully ripe fruit. Therefore it is important that the fruit be freshly picked, just a little more than half ripe, and that the boiling of juices and sugar stop at the right moment. If the juice is boiled too long the Pectin undergoes a change and loses its power of gelatinizing.

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would be most effectively protected from lightning discharges. For ordinary purposes a far simpler system is adequate. For example, good protection is afforded by a conductor running along the ridge of a building and extending to the earth, either at the middle of the sides or, preferably, at each of the four corners. Points should rise above any prominent features of the building, such as chimneys or, in the absence of these features, from the ridge of the roof at intervals of 25 feet or thereabouts. Fuller details of lightning-rod installation are to be found in Farmers' Bulletin 367, which may be had on application.

#### HOW TO SAVE THE MOISTURE.

"This has been a dry year; one that has been given ample opportunity to test the gospel of moisture preservation through consistent cultivation. Has the land which was plowed deep and kept open with a spongelike tendency of absorbing all the moisture that fell from which the weeds were kept cleared, and over which a fine blanket of mulch was kept that prevented the moisture below from evaporating, produced a half-matured, wilted, stunted crop?"

"Man cannot control the amount of moisture that falls, but he can control the amount of cultivation that he gives his soil. By cultivation he may more nearly approach the benefits derived from ample precipitation than through any other method."

Compare the crops on such land with those on uncultivated or lands that have received partial cultivation and decide which is the better process. Now is the time to take notes, compile data, make comparisons and draw conclusions. Practically all the west has suffered from lack of moisture, but the careful farmer who had properly cared for his ground previous and after planting has suffered less than his neighbor who planted without taking any heed of the principles on which successful farming is based.

Plow the land in the fall. Plow it deep. Keep it loose. Do not let it pack or bake. Do not let it crack and thus let all the moisture that is stored escape.

Keep it clean, from weeds as well as useful crops absorb moisture. If irrigation is practiced, stir the soil when possible after watering and thus preserve 20 or 75 per cent that goes off in evaporation. Late spring plowing of land covered with vegetation increases the loss of soil moisture. This land should be plowed early so as to kill the growth before it has consumed the moisture content of the soil. The ground should be carefully watched. Different kinds of soil need different kinds of treatments. Cultivate the ground for cultivation conserves the much-needed moisture and insures good crops. If anyone be suffering because of the drought, now is the time to get busy preparing the soil to hold all the water that reaches it, for by that method a similar occurrence can be avoided.

"It is a lamentable fact that over 50 per cent of the natural production of the average orchard and garden is being wasted in the American home for want of some simple way of taking care of these products. The little portable canners will save most of this waste and encourage more and better canning at home, as all the members of the family will take an interest in the work, or at least offer their assistance.

"Every well-regulated farm should

have a home canner of some description, if nothing more than an ordinary wash boiler. It is quite as important as the milk separator or fanning mill. Every child should be taught the art of canning, either at home or in the canning clubs, and every school should have a canning outfit as part of its equipment.

The day is not far distant when every family will have its canning and preserving days as it now has its harvesting and threshing days, when all the members of the family will put aside other work and attend to the canning of fruits and vegetables for winter use."

#### SUMMER PRUNING.

Nearly every fruit grower has his own particular plan or ideal for shaping his trees. The same type of tree is not grown by all orchardists, and should not be, since each type is especially adapted for certain conditions.

Most orchard men practice winter pruning, as winter is the time to prune to shape the tree. If heavy pruning is done it can be accomplished in the early spring or dormant season with the least injury to the tree. Summer and winter pruning have their particular advantages. I wish to take up one point in connection with summer pruning and that is the pruning of bearing trees for increased color.

In some fruit growing sections the apples do not take on sufficient color to make extra fancy fruit. We have found that under such conditions by practicing summer pruning we can increase the color from twenty to forty per cent.

Summer pruning can not be done any time the grower happens to have time to do the work, but must be done at a definite time. That time is after the terminal buds have set.

At this time the trees have stopped growth for the season and the wood begins to ripen up for winter. If pruned earlier the tree will send out a new growth after forming a rosette at each cut, and this late growth will often winter kill.

Summer pruning should not remove the heavy branches but should take out the interlocking branches and about one-half the present season's growth. This opens up the tree and admits the sunlight at the ripening period.—W. C. Edmundson, Idaho Experiment Station.

#### "THOROUGHbred"

The word "Thoroughbred" does not apply to any kind of horses or any other livestock save the English racing horse. The word "Thoroughbred" is sometimes incorrectly used to designate pure-bred or full bloods. You may have pure-bred Percheron horses, Shorthorn cattle, Shropshire sheep, Poland-China hogs and so on, but not "thoroughbreds." You may own a pure-bred Belgian, but you cannot own a Thoroughbred Belgian. You could as correctly say that you have a Percheron Clydesdale.

The more common of the terms used to indicate lineage are pure-bred, cross-bred, grade and scrub. Thoroughbred is its strictest term means the English race horse. This was the original use of the word. The term purebred is used synonymous with fullblood. It indicates animals of well-defined breeding without admixture of other blood. In speaking of pedigreed Shorthorns, for instance, one should not say "thoroughbred," but purebred.

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## THE HOME

### RELISHES AND PICKLES.

This is the season of the year when many of our readers are putting up pickles and relishes. Here are a few recipes that will interest you.

#### Tomato Ketchup.

Select red ripe tomatoes. The extra juice, small and broken fruit, which will not do for canning, may be used, if they are sound and red. Any green yellowish parts of fruit will make a ketchup inferior in flavor and color, and not good for market. Use whole spices tied loosely in a bag while cooking and remove before bottling to prevent darkening the product caused by ground spices. This does not apply to red pepper, which helps to give a bright red color. The pulp of sweet Spanish pepper or the ground Hungarian paprika may also be used to give color and flavor. Remove seeds from sweet red pepper, chop, and add 1 cup of this pepper and 2 medium-size onions to 1 gallon tomatoes before cooking.

Cook the tomatoes thoroughly, put through a colander or sieve, saving all pulp, and measure. For every gallon of pulp use the following:

- 2 tablespoonfuls salt.
- 4 tablespoonfuls sugar.
- 1 tablespoonful mustard (powdered).
- 1 pint good vinegar.
- 1 level tablespoonful each of whole allspice, cloves, cinnamon, and pepper.
- 2 small red peppers sliced and seeds removed.

After putting tomatoes through colander add ground spices and spice bag, and cook for 1½ hours, or until nearly thick enough, then add vinegar and cook until thick. Rapid cooking (being careful not to scorch the ketchup) will give a better color than slow cooking. The finished product should be a fine bright red.

Pour the ketchup at once into hot sterilized bottles. If any quantity is made for sale, set the hot bottles at once into a vessel of hot water, having a false bottom in it to prevent breakage, put the cork stoppers in loosely and process at boiling point for 30 minutes. Drive the corks in tightly and when cool dip mouth of bottle into melted paraffin, or cover stopper with sealing wax.

#### Mustard Pickle.

##### Vegetables.

- 1 pint whole small cucumbers.
- 1 pint sliced cucumbers.
- 1 pint small whole onions.
- 1 cup beans.
- 3 green sweet peppers.
- 3 red sweet peppers.
- 1 pint green fig tomatoes, or 1 pint cauliflower.

##### Dressing.

- 1 quart vinegar.
- 4 tablespoonfuls flour.
- 1 cup sugar.
- 3 tablespoonfuls powdered mustard.
- ½ tablespoonful turmeric.
- 1 teaspoonful celery seed.

Cut all vegetables before measuring. tomatoes into halves, cucumbers into slices, string beans into 1½-inch lengths, diagonally or on the bias, and chop peppers. All vegetables should be tender and the whole cucumbers not longer than 2½ inches.

Put all vegetables into brine over night; then freshen in clear water for 2 hours. Let these vegetables stand in liquor of one-half vinegar

and one-half water for 15 minutes; then scald in same liquor.

To make mustard dressing, rub all the dry ingredients together until smooth; then add the hot vinegar slowly, stirring to make smooth paste. Cook over pan of water, stirring carefully, until the sauce thickens. Then drain the vegetables thoroughly and pour the mustard dressing over them while hot. Mix well and pack in sterilized jars. Process 10-ounce jars for 20 minutes at 180 degrees F. (simmering).

#### Spiced Cucumber Salad.

##### Vegetables.

- 5 pounds sliced cucumbers (about 2 dozen).

- ½ cup chopped onion.
- 2 cups chopped sweet red pepper.
- 1 cup chopped sweet green pepper.

##### Spiced Vinegar.

- 1 quart vinegar.
- ½ cup sugar.
- 1 tablespoonful each salt, powdered ginger and mustard seed.
- 2 teaspoonfuls celery seed (crushed).
- 1 tablespoonful each of whole pepper, cloves, cinnamon, and allspice.

Mix the cucumber and onion and sprinkle alternate layers with salt, using three-fourths cup for whole. Let stand over night. Put peppers in brine over night. Next morning drain vegetables and freshen for 1 to 2 hours in clear water.

Put all whole spices in cheesecloth bag, except the celery seed and mustard seed, which are put in loose. Add spices to the vinegar and boil for five minutes. Drain the vegetables well and pour the hot spiced vinegar over them. Let stand 24 hours. Pack, distributing the pepper well and flattening some of the cucumber slices against the face of each jar. Fill jars with same vinegar and paddle well to remove all bubbles. Garnish with strips of red pepper or pieces of spice. Process 12-ounce or pint jars for 15 minutes at 180 degrees F.

#### Pickled Onions.

Select small white onions and sort into two sizes, one-half inch diameter in one and three-fourths inch in other. Peel. Cover with fresh water and let stand for 2 days, changing the water on second day. Wash well and put in brine for 4 days, changing brine at end of second day. Take out of brine and put in boiling water. Let stand for 10 minutes; then put in cold water for 2 hours. Drain, and pack in jars, putting in a few small red peppers and garnishing with sprigs of mace. Fill jars to overflowing with spiced vinegar, made previously and allowed to stand for a few days with spice bags left in it. Process as for pickles.

#### Spiced Vinegar.

- ½ gallon vinegar.
- 1½ tablespoonfuls celery seed.
- ½ cup grated horseradish.
- 1 cup sugar.
- 1½ tablespoonfuls mustard seed.
- 1 tablespoonful salt.
- 1 tablespoonful cinnamon.

Cloves, nutmeg, and grated onion may be added if desired.

#### Green Tomato Pickle.

- 1 gallon green tomatoes.
- ½ dozen large onions.
- 3 cups brown sugar.
- ½ lemon.
- 3 pods red pepper.

- 3 cups vinegar.
  - 1 tablespoonful whole black pepper.
  - 1 tablespoonful whole cloves.
  - 1 tablespoonful whole allspice.
  - 1 tablespoonful celery seed (crushed).
  - 1 tablespoonful mustard seed.
  - 1 tablespoonful ground mustard.
- Slice the tomatoes and onions thin. Sprinkle over them one-half cup salt and let stand overnight in a crock or enameled vessel. Tie the pepper, cloves, allspice, and celery seed in a cheesecloth bag. Slice the lemon and chop 2 pepper pods very fine. Drain the tomato and onion well. Add all seasoning except 1 pepper pod to the vinegar, then add the tomato

and onion. Cook for one half hour stirring gently at intervals to prevent burning. Remove spice bag to prevent darkening product. Pack in 10-ounce jar and garnish with slender strips of the red pepper, placing them vertically on the opposite sides of each jar. Process for 15 minutes.

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Brick is the material that has stood the test of centuries—that is time-proof, fire-proof, heat and cold proof, vermin-proof and at the same time highly artistic. Better send for a copy today—FREE for the asking—without obligating you in any way. A postal will do, or phone to Wasatch 951 and it will be sent to your address.

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Enclose this ad. with your request

## Your Farm Equipment

should include "Never-Rip" work clothes.

—They'll give lasting service and pay for themselves many times over, in lightened labor, clothing saved and in service given.

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## SCOWCROFT NEVER-RIP

—1200 farmers and working-men ask for them by name every day—

—because they know that entire satisfaction is guaranteed when the label says "NEVER-RIP."

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Send for our Free Samples and Factory Prices. We can sell you the best roofing made at Money Saving Prices.

### 58c a Roll.

Cement and nails furnished Free. Every roll fully guaranteed. Write us today for samples and catalog. Address  
**OTTAWA MANUFACTURING CO.**  
3041 King St. Ottawa, Kans.

## TABLE SIRUP FROM WASTE WATERMELONS

A delicious table sirup can be made from watermelons and affords to the farmer, according to the fruitjuice specialists of the United States Department of Agriculture, a convenient means of using the surplus watermelons which otherwise are allowed to spoil in the field. Such sirup has been made by farmers in a small way in various parts of the South, and the Department endeavored to work out exact methods of making it as a possible by-product from surplus melons. This sirup can be used immediately or can be bottled hot in sterilized jars and kept just as is done in the canning of fruit. It is reddish brown in color, very sweet and well flavored and will serve most of the purposes for which sirup is used in the home. It has been tried with satisfactory results in making ginger cake, home-made candy and as a sweetening and flavoring in ice cream.

As the specialists point out, while the juice of commercial watermelons such as the "Tom Watson" contain on an average only about 7 per cent of sugar, or less than many other fruit juices, the ease with which the juice can be pressed out partly offsets the low sugar content. The method described below calls only for utensils found in every household.

### Directions for Making Watermelon Table Sirup.

Remove the pink flesh and seeds from the rind of sweet, fully ripe melons. Crush the flesh with a potato masher or by running it through a meat chopper. Place the crushed pulp and seed in cloth bags, and squeeze out the juice, which bows out readily. About 5-6 of the pulp will squeeze out as juice. About 13 gallons of the juice will make 1 gallon of sirup. This amount of juice can ordinarily be secured from 10 watermelons weighing from 22 to 25 pounds each.

The juice is then boiled down into a sirup in an ordinary preserving kettle. The juice boils without much foaming until it begins to thicken when the fire should be slackened to prevent foaming and burning. The red coloring matter in the juice coagulates during boiling and part of it rises to the surface where it can be removed by skimming. The remainder floats about in the juice forming red particles which gather near the top. Toward the last of the boiling the sirup must be watched constantly. If the housewife has a candy thermometer she should take the sirup from the fire as soon as it reaches a temperature of 220 degrees Fahrenheit, otherwise she should let it cook until a small sample on cooling is about as thick as maple sirup.

When the boiling has finished, the sirup can be set aside to cool in covered vessels or can be poured while hot into the sealed in cans or glass containers.

Where a cider press is available the melons can be cut into pieces and arranged on the press so that the pressure will extract the juice of the pulp before it presses the rind. The juice of the rind is not so rich in sugar and experiments with rind juice alone indicate that it is not suitable for sirup.

### To Remove Red Coloring Matter.

If it is the desire to make sirup free from red particles, start the sirup boiling and transfer the juice to tall glass jars or

other tall containers and allow it to settle and cool for a few hours. This allows the red particles to settle to the bottom. The upper part of the juice can then be poured off and boiled into sirup.

## Pattern Department

Full directions for making as the quantity of material required, accompany each Pattern. Price of each Pattern, 10c; no extra charge for postage. When ordering, all you have to do is to let us know your name and address, the number and size of each Pattern you want, enclose 10c for each pattern, and address all your orders to: PATTERN DEPARTMENT, THE UTAH FARMER BLDG. UTAH.



7347—Infants' Set of One-Piece Garments. Cut in one size. This set consists of a dress, petticoat, coat, cape, sacque and bib. Price of pattern 10 cents.

7362—Ladies' Skirt. Cut in sizes 22 to 32 inches waist measure. This skirt is cut in three gores. Price of pattern 10 cents.

7381—Ladies' Dressing Sacque. Cut in sizes 34 to 42 inches bust measure. The flowing or gathering sleeves may be used. Price of pattern 10 cents.

7359—Misses' Dress. Cut in sizes 14 to 20 years. The dress consists of a waist and a two-piece skirt. Price of pattern 10 cents.

7392—Boys' Suit. Cut in sizes 2, 4, 6 and 8 years. Long or short sleeves may be used. Price of pattern 10 cents.

### PATTERN ORDER COUPON

Send the following Patterns:

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Pattern No. .... Size or Age. ....

Pattern No. .... Size or Age. ....

Name. ....

Town. ....

I enclose ( ) R.F.D. .... State. ....

(To pay for same)

## SMUT EXPLOSIONS

Several weeks ago an article appeared in these columns entitled "Explosions From Electric Sparks." Recently a number of threshing machines in this state have been destroyed by fire caused by "smut explosions." These explosions may be, in fact, were very probably, due to ignition of the smut by sparks of static electricity. The Washington State College and Experiment Station has issued a bulletin (No. 117 on this subject, covering separator fires in the summer of 1914 in that state. The bulletin gives a most interesting and comprehensive summary of investigations on smut, its inflammability, the prevention of explosions, etc. The causes of the explosions are summarized in the following paragraph:

"It thus becomes reasonably certain that the fires, so-called explosions, were caused by a combination of conditions; namely, exceedingly dry season, unusually large amount of smut, increased amount of organic dust from broken grain and straw, increased combustibility of both smut and dust, increased amount of static electricity."

The very first of half a dozen recommendations strongly urged to the attention of machine owners and operators is the following:

"That the cylinder of the separator be grounded by means of an electric brush connected to the grounding wire. This connection should be made by an iron peg driven a foot or two into the ground. It will serve to conduct off at least a large portion of the electricity generated and is an inexpensive precaution."

The details of the attachment of such a grounding wire are given thus:

"Ordinary stranded lamp cord is recommended for the wiring because it is strong and flexible. It may be stapled to the wooden frame of the separator in any convenient way and can be so installed that it will not cause delay or trouble of any kind. A wooden block can be fitted to the frame in such a way as to carry a brush made up of several wires placed so as to rub on the cylinder shaft. This should be so made that it will not be knocked off by the belts and so that it can be easily kept clean and free from grease."

Dry smut contains about four per cent of oil. When floating in dry air, smut is exceedingly inflammable, much more so than flour, and the smut-air mixture is as readily ignited by even weak electric sparks as by a flame.

While the present Colorado conditions may be identical with those of last season in Washington, the results of the Washington investigators would seem to be at least worthy of some consideration.—C. E. Vail, Colorado Agricultural College, Fort Collins, Colorado.

### UP-TO-DATE MILKMAN

"What are you giving your cows in the way of galactagogues?" asked the Irvington professor of the milkman.

"Oh," said the milkman, who has just been graduated from Purdue and is not to be stumped by an Butler College pedagogue, "their sustenance is wholly of vegetable origin; rich in chlorophyll and opulent in butyraceous qualities."

"A pint, if you please," said the professor.

"Git up," said the milkman.—Exchange.



### CACHE COUNTY FARMERS. (Continued from page one)

trip from their town south as far as Lehi. They were dairymen, farmers and some business men. They visited stock and dairy farms along the road. At Brigham they were much interested in the small pumping plants. They came to Lehi to see the great pumping plant located on Utah Lake. From Salt Lake they returned by way of Park City.

Those in the party were George G. Hendricks, cashier of the Richmond State bank; Earl Robinson, F. G. Robinson, Cyrus Bullen, Walter G. Thompson, J. W. Hendricks, president of the Utah Condensed Milk company; State Senator J. W. Funk, S. W. Hendricks, postmaster; T. H. Merrill of the state land board; Milton Bullen, C. L. Funk, George O. Webb, F. H. Whittle, William Anderson, J. A. Carson, J. R. Thomson, Joseph Webb, Eli Webb, W. R. Tripp, C. P. Swendsen, B. Y. Monson, S. R. Telford, J. A. Strass, P. N. Nelson, N. K. Nelson, F. H. Traveller, A. E. Harris, Edward Webb, Henry Christofferson, William Merrill, William Smith, George Caine of the Utah Agricultural college and John T. Caine, III, of the Agricultural college.

### FARMER DAY IN CARBON AND EMERY COUNTIES.

The total number who availed themselves of the trip throughout Carbon and Emery Counties on "Farmer Day," to the different towns, reached near the two hundred and fifty mark. This is an exceptionally fine showing and is evidence to me that this number will be easily doubled next year. I believe the losers were those who did not join us on the trip. Farmers except in very few instances should not allow themselves to become so busy that they cannot avail themselves of such a privilege as Farmers Day afford to learn of the better farm methods used by a neighbor, the new ideas of others, the demonstrated successes of different crops under treatment of definite method, the value of crop rotation, the use of barnyard manure, the minimum use of irrigation water, cultivation practices, crops grown on fall ploughed land, dry land and non-irrigated grain; the enthusiasm one receives and many other benefits that one derives.

Farmers and business men don't miss these opportunities. They don't present themselves every day. The most successful farmer, the most successful business man or the most progressive community is the one that has time to visit others and learn their failures and successes. The course of self experience is often too expensive for most men to register in. As farmers the world over, we do not visit each other enough, and as business men we are guilty of the misdemeanor of offering too little encouragement to the farmer. "Farmers' Day" was a great success in every town except one. The people of that town will be the losers. They know whether or not they turned out. On our trip we had the association of Dr. Evans (State Leader) three days, and Dr. Frank S. Harris (head of the school of agriculture, Utah Agricultural College two days. These men are men of experience, and aided the farmers materially during their short stay.

As I stated through the press some time ago we are going to hold another County Fair this year. It will be held

in Price, as on other years, and has been arranged for on the 23-24-25 of September. The officers and local committees are now all chosen and are working assiduously to make the fair better than it has been in the past years.

The two counties and the city of Price have appropriated very liberally and the business men have done themselves proud filling the ad columns. ties; Agent U. S. Department of exhibits ready this year and God has blessed us as a people with abundant crops of many kinds. All of these things united together make it possible to hold a wonderfully good fair this year.

It is up to all of us to boost now and we will surpass our record of the past two years, although they were very successful, by a large margin.

Everybody work and boost until after the fair is over, then our success is evident. Very respectfully,

ROBERT H. STEWART,  
Agriculturist Carbon and Emery counties; Agent U. S. Department of Agriculture.

### FOR THE TOILET

Where the hair is dry and brittle, and can not be made to stay in place, a tonic for the scalp should be used, rubbing it into the scalp, not on the hair. Then for a dressing to be used to keep the dry hair in place, use a very little of the following brillianine, just lightly touching the hair with it. Put into a large bottle three and one-half ounces of sweet oil, four drams each of castor oil and glycerine and three drams of any preferred extract for perfume; then add enough grain alcohol to make it eight ounces altogether. Shake well before using, pour just a little into the palm of the hand, and lightly stroke the hair with this. If the health of the body is bad, the hair will show signs of it.

Equal parts of bay rum and castor oil, well shaken before using, is claimed to be one of the best and safest hair-growers there is. Apply to the scalp with the finger tips once or twice a day. Enough will get on the hair to keep it from being too dry.

Dry, lifeless hair can only be corrected by the use of some oil or a tonic that contains this substance, unless one's health can be improved, when the hair conditions will also improve. Here is a good tonic for dry hair: One and one-half ounces of coconut oil, one ounce of lanolin, four drams each of glycerine and tincture of benzoin. Mix this well; rub it well into the scalp each night with a thorough massage of the scalp with the tips of the fingers.

"Can you give me any ideas about making my yard more beautiful?"  
"Yes. Remain in the house."  
Houston Post.

## To Be Sold

80 acres land—80 shares water—4 miles from Lehi Sugar Factory—in whole or in part—to the right person or persons—price and terms to one's liking.

**KORNS WAREHOUSE CO.**

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PAULINE MARRIOTT  
Who won State and Intermountain  
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Are you getting all that's coming to you? Many of our old subscribers are just beginning to realize how valuable the Utah Farmer is to them—not only because of helpful articles printed each week but the special service you are entitled to without charge. We print the Utah Farmer for you.

Forget the fact that you are only one of many thousand readers but treat us just like our whole organization were at your individual, exclusive service.

Read every article as if it were written for your eyes alone.

Regard every advertisement as a personal message to yourself only.

Don't be afraid of putting us to extra trouble. We'll gladly give information or advice about your special farming problems that will be worth money to you. We want to be of service to you—will you give us the opportunity?

Don't say we're only bluffing about this—put us to the test, and then if we fail you, stop your paper and ask for your money back.

We don't want to brag on ourselves, offensively—but we do want you to get what's coming to you—the willing service of our entire organization.



# How Old and New Buildings Can Be Improved with Stucco

On a great many farms are to be found frame structures out of repair. They detract seriously from the appearance of the premises. There is a very simple method by which buildings of this kind can be made substantial and practically new. This is through the use of Portland cement stucco. Even dwellings of bad design are frequently remodeled by the use of stucco so as to appear like new and attractive structures. They are not only improved with respect to appearance, but are made thoroughly substantial and weather-proof.

Stucco is not expensive, and if properly applied is fire-resisting and enduring. It may be applied to brick and stone walls, concrete blocks and frame structures. In the case of frame structures the stucco is applied after the building has been covered with wood or metal plastering lath.

## Materials.

The materials composing stucco consist of Portland cement and sand with a small admixture of hydrated

and before the mortar hardens the surface thoroughly roughened by scratching with a sharp instrument or saw-tooth paddle. After the first coat has been applied and becomes hard the second coat is applied to the roughened surface of the first coat. Before doing this the first coat must be thoroughly wet down with water, to prevent the moisture from being absorbed from the second coat. The proportions of the second coat may be the same as those of the first with the omission of the hair or fiber. The surface of this coat is roughened and dampened in the same manner as described for the previous coat. In the third coat the proportions are 1 part Portland cement to not more than  $2\frac{1}{2}$  parts sand nor less than 2 parts sand by volume. Lime may be added in the proportion of 10 per cent of the volume of cement. It is sometimes the custom to use only two coats for ordinary work and in this case the third coat just described is the finish coat, the second coat being omitted. The surface

ed to it and the stucco applied as described above.

In the third class, the mortar joints of the brick or stone work are raked cut to a depth of about 1 inch to form a key for the new stucco. The

between the stucco and the block. The mortar joints between the block are left open about 1 inch from the outer surface to insure a proper key for the stucco. The block is thoroughly wet down before the stucco is applied.



A BRICK HOUSE BUILT IN 1862.

Becoming dilapidated, it was restored with stucco, as shown.



A POULTRY HOUSE WITH STUCCO FINISH.

This attractive structure illustrates the adaptability of stucco to farm buildings.

lime or slaked lime putty to give the mortar more plasticity. The lime also tends to whiten the stucco. The sand should be free from organic matter and uniformly graded from coarse to fine. The lime should also be uniform in quality.

The proportions for the first coat are 1 part Portland cement to not more than  $2\frac{1}{2}$  parts of sand by volume. Where lime is used 10 per cent by volume of the cement is the usual amount. In the first coat enough hair or vegetable fiber is added to insure a proper bond or key between the lath and mortar. The most satisfactory construction for the first coat is to plaster, if possible, on both sides of the lath, thus thoroughly imbedding same. If this is not possible the lath is applied to sheathing boards and care must be taken to thoroughly force the mortar through the lath and in contact with the boards back of the lath. If this is properly done it will insure complete imbedment of the lath, which is particularly necessary where metal lath is employed, for it will prevent possibility of corrosion. As soon as the first coat is applied

finish decided upon, such as rough cast, pebble dash or float finish, is used on the surface of this third coat.

There are two very important precautions to be observed in the application of stucco. First, no stucco must be applied during freezing weather or if there is any possibility of the temperature dropping below freezing. Second, each coat must be kept damp and prevented from drying out by spraying or by hanging over the surface cloths which should be kept constantly wet. Cloths should be used where the stucco is exposed to hot sunshine.

## Forms of Stucco Construction

Stucco is used in four general classes of construction, first, the over-coating of old frame structures. Second, application to new structures by the use of wooden or steel frame work with wooden or metal lath. Third, its application to old brick or stone structures. Fourth, its application to concrete block buildings.

The second class of work requires little description. The frame of the structure is built in the ordinary way, with lath and sheathing boards fasten-

surface of the brick or stone is thoroughly cleaned and wet before applying the stucco. See that the stucco is forced into the joints to their full depth.

The fourth class is the application of stucco to Portland cement concrete block buildings. This is a very attractive and satisfactory method of construction. The concrete block, when intended to be covered with stucco, may be made with plain faces and no special attention is required to securing a smooth finish. Indeed, a rough finish insures a better bond

Thus prospective builders who object to the appearance of the concrete block may combine the two materials and secure at once the strength and inexpensiveness of concrete block construction and the beautiful appearance of the stucco coating.

In all cases whether structures are old or new, they should have firm foundations and be sufficiently rigid to prevent any settlement or sagging, which will cause stucco to crack.

## A Certain Farmer

PAID HIS COWS \$2.00 A MONTH FOR  
LIVING WITH HIM. HE DIDN'T KNOW  
IT UNTIL HE STUDIED

## Farm Accounting

THEN HE KILLED HIS COWS AND GOT  
SOME GOOD ONES.

SEND YOUR SONS TO THE

**L. D. S. Business College**

SALT LAKE CITY

FOR THE TRAINING THAT PAYS

Fall term opens September 3.



# The Why of The Cultivator

By Ernest A. Marris.

Most of us know that in actual practice cultivation keeps the weeds down and the moisture near the surface of the soil, but why it helps the moisture to stay on the upper strata of the ground few of us understand. There is a reason for all things and, once understood, it is easy to practice.

Cultivation stirs the top layers of the soil, allowing the air to warm and to permeate the lower layers, and at the same time enabling the soil bacteria that converts the food elements into available form for the plants to work more efficiently. It also starts the moisture up toward the surface both by capillary action and by the natural law of evaporation.

If you do not cultivate the moisture on top evaporates more and more as the soil becomes more heated, dry and hard. The closer you can keep moisture to the surface the better growth your crop will make, and the larger returns you will get. By the word "crop" I mean anything you are growing, from vegetables to fruit.

When to cultivate depends on the kind of crop, on the soil, on the exposure of the land, on the temperature, on the winds, on the amount of rain and when it falls each season.

On irrigated land cultivate after each irrigation when the ground is dry enough to form a blanket of fairly dry, crumbly soil.

Should showers come late in the season watch out for weeds. Late rains are usually followed by warm days, that makes the weeds fairly jump up out of the ground. Do not get caught. Get into the field as soon as the weeds can be noticed.

When after the last rains have come and you have an ideal blanket of dry, loose soil two or three inches deep and the crop is coming along well, put wide shovels on your cultivator and stir and turn over the surface as often as you can without undue expense.

Orchards should be thoroughly and deeply cultivated after harvest in order to save every drop of moisture for the trees when they are exhausted from producing their crop.

The character of the soil makes a difference in the method and time of cultivation. Light pland soil, especially if it is at all clayey, must be cultivated oftener and sooner after planting than the heavier lowland soil. The exposure of the land, and its slope, may change conditions, requiring more frequent stirring. It is well to stop work during real hot, drying weather, as the moisture evaporates rapidly and the benefit secured may not be worth the labor. The only exception for working then would be for killing weeds.

When operating the cultivator always take ample room at the end of the rows to turn. When making the first cultivation run as close to the plant as you dare. Set the machine narrow so that you will only have to watch one side and go twice in a row. For the second cultivation set the machine to clear both rows and go deep into the soil. After that narrow up the machine and put on one wide shovel. For stirring and turning over the dust blanket use only the wide shovel, but be careful not to cut any of the feeder roots. This last hint applies to both one-horse and two-horse cultivators.

The cultivators should be easy and quick of regulation, so that they can be swung to catch a weed or to miss a plant that is out of line, or to lift it out of the ground or made to dig deep in a hard patch.

The disc harrow, in its many forms, is best for cutting up and pulverizing the ground in the spring, and by using an orchard extension is good in orchard work. After the spring work is done the lightest implements consistent with strength are best. The less weight of team or tool that passes over the ground the less compact the soil becomes and the better the results.

## MATURE MALES.

The use of immature sires is a common mistake made by many live stock farmers. Such facts of animal breeding as are now available indicate that under average conditions males beget and females produce their strongest and most useful offspring and most nearly perfect types after reaching maturity. The breeding function increases in efficiency up to maturity and beyond. As the physical powers decline the reproductive functions yield offspring of less value.

The young sire is all too popular on the average farm. Boars should not be used until eight months of age and it is far better to have them two to six months older before permitting service. The boar should be in his prime at three to five years of age. The ram lamb will give fairly satisfactory service to a limited number of ewes if dropped not later than February of the preceding winter. An increasingly large number of experienced sheepmen, however, are insisting on having yearling or two year olds. The bull calf may be permitted to serve cows at twelve months of age, but had better be held back until fifteen to eighteen months old. The stallion, if growthy, is permitted a few mares as a two year old. The number may be increased when he is three, but should not exceed thirty to thirty-five head. The five to eight year old stallion will stand heavy service and if wisely used and cared for will, on the average, beget better offspring, as compared with the colt.

Too often the tried and proven sire, when no longer useful in one herd, is in little demand from other stockmen and is definitely discarded when his breeding powers are most active and efficient. A movement for wider use, in many cases by means of community handling, of sires of known value and prepotency would assist materially in raising the standard of live stock excellence in many sections.—E. J. Iddings, Animal Husbandman, Idaho Experiment Station.

## WURRA! WURRA!

There is a cheerful Irishwoman on the East Side whose husband is a confirmed hypochondriac.

"Good morning, Mrs. Clancy," said a friend, as they met at market. "An' how's the family?"

"They's all doin' well," said Mrs. Clancy, "with the exception of me ould man. He's been enjoyin' poor health now for some time; but this mornin' he complained of feelin' better."—Exchange.



**REST A WEEK**  
or so at the Beaches  
Long Beach—Venice  
Catalina  
Then see the  
Expositions.

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Trains leave Salt  
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\$35.00 to San Diego  
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Expositions

# Summer Excursion

Via



Following Rates Apply From Salt Lake City.

## EAST

Denver	\$22.50
Colorado Springs	22.50
Omaha	40.00
Kansas City	40.00
St. Louis	51.20
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Chicago	56.50
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Correspondingly low rates to many other points.

## SELLING DATES

September 1, 8, 15.

Limit, October 31.

Stop-overs; Diverse Routes.

## WEST

Portland	\$37.00
Seattle	44.50
Tacoma	42.80
San Francisco, via Ogden	35.00
do. one way via	
Los Angeles	35.00
do. one way via	
Portland	53.50
Los Angeles, via Southern Pacific	40.00
do. one way via	
Salt Lake Route	35.00
do. one way via	
Portland	62.50
Side trip rate Los Angeles to San Diego and return via rail \$5.00, and via steamer \$4.00, in connection with circuit tour tickets.	

Tickets on sale daily to November 30, 1915, inclusive.

LIMIT, three months from date of sale, but not to exceed December 31, 1915.

## NORTH

Excursions to northern Utah and Idaho points, August 14, 28; September 11, 25.

Proportionately low rates from other Oregon Short Line Stations—See agents.

**HOTEL UTAH**  
City Ticket Office



For the Buyer

## THE FARMERS' MARKET PLACE

For the Seller

## THE GEM HERD.

## Improved Chester White Swine

The Home of the Western Prize Herd  
My winnings at Idaho State Fair 1913,  
were 13 first, 3 seconds, champion boar  
and sow, and champion fat barrow.  
At a Tri-County fair held at Jerome, Ida.,  
I took all but one second. I have any-  
thing wanted in Chesters from a wean-  
ing pig to a champion boar or sow at  
prices all can afford. High class stock.  
Write me.

For Reference—all old customers.

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A few choice registered and Grade  
Holsteins, including a yearling grand-  
son of "The King of the Pontiacs."

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## A Debt Reducing Loan

YOU CAN PAY OFF THE PRIN-  
CIPAL GRADUALLY.

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## WHY NOT ADVERTISE?

If you have some pure bred stock  
and want to sell them, why not use  
a little advertisement on this page?  
It will bring results. Try it.

Sheep, Cattle  
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## FOR SALE

Pure bred Cotswold's, registered and non-  
registered, in small or large lots.  
Registered Shorthorns. Beef and milk  
strains

ROOSEVELT LIVE STOCK CO.

CLEVELAND, IDA.

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## BUTTER WRAPPERS

We carry a large stock of the Best  
Vegetable Parchment Butter Wrap-  
pers and Especially Prepared Ink for  
Printing the same. We furnish them  
Postage Prepaid at the following  
Prices, money to accompany order.

100	.....	\$ .90
200	.....	\$1.25
500	.....	\$2.00
1000	.....	\$2.75

Send all orders to

THE UTAH FARMER  
LEHI, UTAH

## Lucerne

(Continued from page seven)

dock well within twelve months from  
seeding. In other districts, where  
nurse crops are in favor, it is often  
found that the spring months may be  
dry and without moisture, and the  
lucerne would then be inclined to  
burn off, or at any rate make little  
growth, but remain as it were at a  
standstill, until the rains came, say in  
December or January. This would  
mean that the land carrying the lucerne  
crop would be practically giving no  
yield whatever for the spring months.  
The oats, or nurse crop, besides giv-  
ing a crop help, shelter the young  
plant of lucerne; under these con-  
ditions a nurse crop is therefore a  
paying proposition. It has been found  
that such nurse crops do not have any  
material influence on the subsequent  
growth, but the lucerne makes little  
or no progress till the nurse crop is  
removed.

Care of Young Lucerne.—In dis-  
tricts where lucerne is looked upon as  
the staple crop, the first year is given  
over to endeavoring to give the plant  
a really good start, and little or no  
return is expected from the lucerne  
for this period. On no account should  
heavy livestock be allowed to graze  
on the lucerne during this first year  
(calves would not do much harm).  
Heavy stock tramp and consolidate  
the surface soil and tend to kill out  
the young tender plants. Sheep graze  
too closely to be of value while the  
plant is only fixing itself in the soil.  
To encourage the growth of the  
lucerne it should be judiciously cut,  
and it is considered that the cutting  
of the lucerne tends to help the plant  
to more vigorously send down its root  
system. In the first and second cut-  
ting of the lucerne it is not an ad-  
vantage to cut too close to the ground.  
Little or no growth will be made up  
to this stage, so that all that should  
be done is to cut off the top of plant  
to help stimulate the root growth  
as previously stated. By leaving this  
short cut on the ground it helps from  
a mulching and manuring point of  
view.

Just when and how often to cut  
lucerne will depend on circumstances  
and weather conditions prevailing. On  
an irrigation farm a man depending on  
rainfall alone, but even here much de-  
pends on individual circumstances, and  
every crop should be treated on its  
own merits.

Lucerne should improve from year  
to year, and reach its best in its third  
and fourth seasons. As this crop de-  
velops on good land it should be  
possible to cut at any rate six  
times per season. Attention  
should be given to the plant to  
indicate when the cutting should take  
place. Some growers lay it down  
that when the field is about a quarter  
out in bloom is the time to cut. Other  
growers insist upon it that the bloom  
has not so much to do with the actual  
time to cut as has the appearance of  
the crown head of the plant. When  
the plant should be cut will be found  
that young shoots are beginning to  
appear at the crown head, and these  
shoots indicate when the crop now  
standing perhaps 2 feet high should

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The Sire of Durocs With Immense Size, Extreme Length and  
Bone Excellent Feet.

250 Choice March and April Pigs ready for delivery now. Can  
furnish Boars and Sows not related to each other.

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VIRGINIA ILLUSTRATOR, a Giant Son of the 1000 Pound Illinois  
Grand Champion ILLUSTRATOR, who sold for \$2000.00.

When you buy Durocs buy from an old and reliable firm who  
guarantee to please you or refund your money.

## RICHARDS LIVE STOCK CO.

Successor to Richards Brothers.

VIRGINIA

IDAHO

be cut if the settler is to give the next  
cut its chance.

Lucerne as a crop demands careful  
watching and attention. If by any  
chance the crop or cut receives a  
check in growth, and begins to bloom  
when, say, only 9 inches high, no rain  
or watering will ever make that cut  
grow any taller in the stem, and the  
longer this growth remains uncut the  
more will it retard and check the  
prospects of the next cut. Hence it  
is highly important that the settler  
should be prepared to cut his lucerne,  
even if it is only 9 inches high, im-  
mediately it begins to show the bloom  
and the young shoots sprout.

## WHEN TO MARKET

## FARM PRODUCTS.

The problem that the Nephi farm-  
ers are "up against" is true of other  
farmers in most parts of our state.  
We quote from the Juab County Times  
which expresses the sentiments of the  
farmers in one of our largest grain  
growing sections.

Now that the farmers have nearly  
completed the work of harvesting their  
big grain crop and have it in the stack  
ready for the thrasher, their big  
annual problem of whether to hold  
their grain and sell at once begins to  
loom up, and on the decision of  
Brother Farmer on this question very  
often depends the matter of his sea-  
son's profits. Last year a good many  
thousands of bushels of grain was sold  
at 78 to 85 cents per bushel in Juab  
Valley, while in the winter and spring  
a considerable amount more was mar-  
keted at \$1.20 to \$1.40 per bushel. The  
great problem of marketing crops is  
demanding more and more attention  
from up-to-date farmers everywhere,  
and as the figures above show, the  
mere matter of being able to hold  
their crop for four or five months re-  
sulted in a gain of from forty to seven-  
ty per cent for the wise farmer. True,  
a number of farmers held too long  
and then rushed into the market as  
soon as the late spring slump in  
prices came on and in this way beat  
the price back down to 90 and 85  
cents once more but even then they  
were getting a little more than the  
man who sold in the fall for 78.

To take an average of the prices  
paid the farmers in the winter and  
spring and an average of the fall  
prices—which is the only way of mak-  
ing a true comparison—it is seen that  
a big fat margin of profit lies with  
the spring market. At the present  
time the usual harvest time slump is  
on—the big commission houses  
"playing safe" by setting their open-  
ing prices down low enough that

there will be no chance of loosing  
and every chance of making substan-  
tial gains. The local market is of  
course fixed by the prices prevailing  
elsewhere and local buyers are no way  
responsible for the rise and fall of  
prices.

The storing of grain which was be-  
gun last year by a wise and fortunate  
few should be considered carefully  
this season by every grain grower in  
the valley. Up-to-date farmers' publi-  
cations everywhere are urging their  
subscribers to hold their grain and  
thus avoid glutting the market.  
Positive predictions are made of a  
rise in price immediately after the  
harvest season ends. There is no  
way of knowing whether last seasons  
phenomenal prices will be reached,  
but a rise of 10, to 15, or 20 cents in  
five months means that the farmer  
will be making money much faster  
than the banks make it, and that, too,  
by simply dumping his product in  
the bin and watching the market.

"Did yer hear of the offer the hotel  
man made?" asked Casey.

"No," said O'Toole. "Phwat was it?"

"He said he'd give a thousand dollars  
to the man that kilt the wild cat  
that's scarin' the guests."

"A thousand dollars! Why, that  
feller ain't got a hundred dollars to  
his name!"

"I know he ain't. But ain't it a  
devil av a foine offer!"—Eastern  
Dealer.

The esteemed Weather Bureau has  
sprung a new one. It is the word  
"smog," and it means smoke and fog.  
The bureau explains that very fre-  
quently there are times when this  
mixture is apparent in the atmosphere  
and it considers the new word a  
great little idea.

Very well, "smog" let it be. But  
why end there? Let's call a mixture  
of snow and mud "smud." A mixture  
of snow and soot "snoot," and a mix-  
ture of snow and hail "snail." Thus  
we might have a weather forecast:

"Snail today, turning to snoot to  
night; tomorrow smoggy with smud."

Bad roads lay a heavy tribute upon  
our agricultural wealth every year.  
Only a small per cent of the farm,  
orchard, garden and livestock prod-  
ucts may be loaded upon cars without  
hauling. Some must be hauled over  
poor roads a long distance. This in-  
creases the expense of marketing,  
which of course means waste of our  
resources. We are too poor as a peo-  
ple to maintain bad roads.



## Bogus Canvassers

We have received letters from people who has been flimflamed by some fake solicitor.

There are a lot of fellows going up and down the country making all kinds of promises and donating all kinds of premiums. They usually have a prominent farm journal on their club list and around this they pile up a number of miscellaneous publications including something published especially for the women folks. On several occasions the Utah Farmer has been the victim. In some way or another these fakers have gotten hold of a copy of the Utah Farmer, and they make this paper the basis of the wonderful bargain that they have to offer.

In nine cases out of ten these fellows are frauds. They make up a list that appears attractive and with a great flourish of trumpets they offer a premium of untold value—usually purchased at a ten cent store. They leave a receipt and away they go. They never send the names of the victims to any of the papers named in the list and in due time we will receive a letter from some fellow who has been roped in, and that will be the first knowledge we have about the matter.

It is difficult to head off these bogus solicitors. All of the leading publications of the country are troubled because of their presence. The only safe way to do is to demand the credentials of the solicitor. Most publishers give a card, good for only one month and if the fellow cannot show one of these it is safe to regard him as a fraud and he should be kicked off of the premises with neatness and dispatch.

The county fair season is especially ripe for the manipulations of these fellows. The solicitor who cannot furnish a credential card ought to be turned over to an officer.

### CANNING COMPOUNDS

#### DANGEROUS TO HEALTH.

The canning season has brought the usual demand on the part of housewives for salicylic acid and boric acid. Housewives are warned that the use of preserving powders are harmful and useless. These preparations are sometimes sold in the form of powder under various trade names and are recommended by the promoters for use in preserving canned goods in home canning. In the directions for use the housewife is told to fill the jar with the fruit or vegetables, cover with water, and add a teaspoonful of the preserving powder. While it is true that these compounds may retard the decay of the fruit or vegetable, it is pointed out by the experts of the Department of Agriculture that their use may be attended by serious disturbances of health. Salicylic acid is well known as a poisonous substance, and one of the evils which may accompany its use is derangement of the digestion. It is therefore plain that its extensive use in food may lead to disturbance of digestion and health.

The Federal Food and Drugs Act prohibits the use of harmful preservatives in foods that enter interstate commerce. The food law of nearly every state in the union forbids the sale within the state of foods that have been preserved with harmful substances. Neither the Federal or State food laws apply to foods that are canned in the home and consumed

there. It would seem, however, that the housewife would not knowingly use, in the foods she provides for her family, substances that she could not use in foods for sale without violating the law, because these substances are injurious to health.

**Artificial Preservatives not Necessary.**

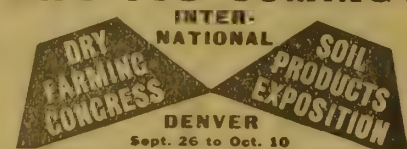
Fruits and vegetables can be kept indefinitely if they are sterilized by heat and properly sealed, and there is no excuse, in the opinion of the experts of the Department, for running any risk by using preserving powders, which may be injurious to health. The use of such powders in addition to

the possible injury to health encourages uncleanly or careless work in canning. Reliance is placed in the efficacy of the preserving compound instead of upon cleanliness and heat.

Wanted to hear from owner of good farm for sale. Send cash price and description. D. F. Bush, Minneapolis, Minn.

# To the Progressive Farmers

## ARE YOU COMING?



**THE FARMERS' OWN SHOW**  
100,000 farmers will attend and exchange ideas. U. S. Government, 17 Western States and Canada will exhibit farm products raised with and without irrigation. See the largest Tractor Plowing Demonstration ever held. Implements exhibited will include everything the farmer needs to make his work easier and more profitable. Speakers will cover all subjects vital to the farmer and his family. We want you to come. Ask questions. Make suggestions. Address INTERNATIONAL DRY-FARMING CONGRESS, DENVER, COLO.

## of the Seven Rocky Mountain States

who are planning to attend the International Dry Farming Congress and Soil Products Exposition,

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# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region

OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE

VOLUME XII; No. 6

LEHI AND SALT LAKE CITY, UTAH

SEPTEMBER 11, 1915

## The Story of Dry-Farming at Nephi

J. W. Paxman.

About thirteen years ago there was a message brought to the good people of Nephi by a couple of youthful appearing College men, announcing themselves as officials of the Experiment Station of the Agricultural College and soliciting a respectful hearing.

The doctrine they enunciated was both pleasing and astounding—pleasing because it brought the promise of relief and astounding because it was so very strange and almost unthinkable. They stated to their small audience in effect; that by scientific experimentations, some new discoveries in the principles of Agriculture warranted them in the declaration that by proper methods of cultivation it was possible for the 20,000 acres of

bench lands lying between Nephi and Levan to produce 20 bushels of wheat to the acre, and in some few instances they may not wonder if 25 to 30 bushel yields could be obtained each alternate year, without the aid of artificial irrigation.

The message was delivered with such assurance that it provoked considerable criticism and some farmers were not backward in telling them of their presumption, which, in turn brought back strong retorts that convinced us of their sincerity at least; but still left us in doubt as to the authority of their message.

For some time after this first meeting there was a battle royal between doubt and hope. The reason for this

(Continued on page five)

## Selecting a Dry-Farm---Dry-Farm Methods

Dr. F. S. Harris.

During the last score of years there has probably been a greater development in dry-farming than in any other branch of agriculture within the arid regions. The term "dry-farming" has been adapted by most of the European countries as a word in their own languages. In most parts of the civilized world its meaning is understood.

Dry-farming does not imply that agriculture can be conducted without water; but its methods are directed toward using a limited precipitation economically in the production of crops. Every plant requires a certain amount of water for its growth, and the aim of dry-farming is to prevent all unnecessary loss of water so that the greater part of the precipitation

will be used for actual plant production.

The effectiveness of the rainfall varies considerably in different regions, depending on the time of year it comes, the condition of the soil, the amount of evaporation and a number of other factors. Twenty inches of rainfall may be no more effective under one condition than twelve inches under another. In general, however, dry-farming is defined as the production of crops without irrigation in regions receiving less than twenty inches of precipitation during the year. Where other things are favorable crop production is often successful where the precipitation is twelve inches or less. With this small amount of moisture

(Continued on page twelve)



ONE OF UTAH'S PROSPEROUS FARMS.

**Dry-Farming** Several hundred people have taken up land under the enlarged homestead act to do dry-farming. To help them and those that are already doing dry-farming we give in this issue a number of very timely articles. We have printed a number of extra copies in order to reach those who are not subscribers of The Utah Farmer. There are a number of the articles in this paper that every farmer should read. We invite any one to write for the Utah Farmer. Tell us of your success and how you did it.



# The Effect of Cultivation Upon The Conservation of Soil Moisture

Chas. E. Beard.

Cultivation may mean various mechanical actions upon the soil, this article will deal with that action which breaks up or pulverizes the surface soil from a depth of from one to four inches, leaving many soil grains and small clods independent of each other. This produces what is termed the mulch and is made on land in crops and land without crops. Its chief use is to lessen the effects of evaporation, when the moisture is already in the soil.

Most farmers have a fair idea how every little soil grain in a moist soil is encircled by a thin film of water. A small grain of soil is always in contact with another or many other grains. In this way a chain of water rings or links extend from the upper edge of moist soil to the lower edge of moist soil.

Evaporation goes on from the soil when the wind or sun takes a portion of the water which encircles the upper soil grains, then the water from the next grain gives a portion of its moisture to the one which has lost its share to the sun, and the next one gives a portion to this one and so it goes on down trying to keep a balance. If evaporation quits a balance comes, if not each film of water gets thinner and thinner until all the available moisture is given up. If rain should come all the soil grains get replenished. This traveling of water from one soil grain to another is termed capillarity. If allowed to keep up water ways are formed which allow the moisture to travel to the surface where evaporation takes place. If the soil grains are disturbed and loosened up below the surface this moisture is prevented from traveling upward because the soil grains and small clods are independent of each other and the soil moisture is held below the point of evaporation.

The effect of cultivation was clearly demonstrated on two strips of land one with no cultivation and another by its side kept with a mulch about three inches deep all summer. On the uncultivated ground a disc plow was grating a thin layer of dust laboriously. Shortly in order to straighten this field it was necessary to take a few slices off the cultivated field. Here is where the plowman eyes were opened for he had left the scraper at home. Instead of the dust leaving the disc

a huge roller of moist earth whirled with the disc and it was necessary to get a shovel and clean the plow often, until this little strip was finished.

At the close of last winter, March first, we were anxious to see how much moisture had fallen. Three pieces of land which came together in a T shape composed of sandy loam were tested. About a rod inside of each piece a hole was dug. The first piece was unbroken sage brush ground, the second was broken in the fall, well plowed. The third was a soil which had carried a soil mulch all previous summer. On the sage brush ground with no run off, moisture was measured 34 inches deep. On the plowed ground of the previous fall 34 inches. On the mulch ground or the one which was cultivated during the previous summer, how deep we can never tell because we gave up the job of digging after getting down five feet. We do know however that close to that spot at this date August 21st, corn is growing six feet high, this in a region of eight inches of annual rain fall showing that you can readily carry moisture from one season to another if cultivation is practiced.

A friend of mine hailed me one day in May of a dry year. He said "How is your corn coming?" "Coming fine" said I "How is yours?" "Hasn't shown up yet, it is too dry." Too dry in May to germinate corn, it was his own fault, two harrowings early that season would have saved the moisture.

An old farmer kept his son from trying to dry-farm in a section of country where the oft qualified 12 inches fall, by saying "How do you suppose you can raise crops without water when with water our crops sometimes dry out?" By the way if you saw this man's farm you would know it was lack of cultivation which gave the Old Man his point.

The wind in many dry farming sections is the chief agent of evaporation. Where it blows about every day and at a great velocity anything which will decrease the velocity is worth considering. It has been found that even in surface cultivation small ridges of soil and small clods running opposite the prevailing winds slacken the velocity of the wind close to the surface and reduces the evaporation. This same practice will also reduce the tendency of the soil to shift.

It should also be noted the mulch can be regulated as to its texture. A mulch composed of a large number of small clods and fine soil is preferable to one composed of all fine soil. King found through laboratory methods in a test of dry quartz sand and fine air dried clay loam used for mulching that in one hundred days the fine clay loam allowed 3.5 more moisture to escape than from the quartz sand. He credited the fine clay with settling so close the capillary water ways formed even though the soil was dry. This idea works well in practice on the farm. Do not make the mulch too fine but if through lack of rain fall and more cultivation the mulch gets very fine do not give up stirring the soil. The point of King's experiment is that even a dry soil will

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## Grand Prizes

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Send for Bulletin I E 309, which gives full information about the Caterpillar Tractor, or ask for literature on our harvester line.

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BUILT IN U.S.A.

The Holt Manufacturing Co. Inc.  
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Nothing to break or get out of fix. Weighs 300 lbs. Does all, and more than the big machines. Pays for itself in a few hours' use. Write for catalog and special introductory proposition.

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## Ditching Made Easy

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Cuts V-shaped ditch up to 4 ft. deep. Fine for levee work; terracing; cleaning out laterals and bed furrowing.

**Simple—Practical**

### NEBEKER USES TRACTOR ON FARM



An Avery 20-35 horse power tractor on United States Marshal Aquila Nebeker's farm at Laketown, Utah.



settle close enough in time to permit moisture to escape.

Cultivation by its action upon the soil liberates large quantities of plant food. This is dissolved in the water surrounding the soil grains. This soil solution itself according to the best authorities creates a certain change in the plant, which takes it up, and enables it to produce a pound of dry substance on less water than where the water is more pure. According to Widdsoe as early as 1699, Woodward experimented by taking rain water spring water and water from the river Thames and found that the plant used less water for the same results from the impure water of the Thames. Authorities have confirmed each other for a long time on the idea that fertility decreases transpiration, or in other words the more fertility the less water used for each pound of dry matter. So we have one more effect of cultivation on the conservation of soil moisture.

Dr. Widdsoe in his book "Dry-Farming" gives great credit to Jethro Tull who two hundred years ago was an enthusiast and scientist in cultivation. It is of more recent date however that cultivation has been applied for the express purpose of conserving moisture. It is past a theory and is confirmed by many excellent authorities. King of Wisconsin shows how he saves 1.7 inches of rain fall in forty-nine days by cultivation. Nessler in 1868 showed that a saving of 60 per cent of the soil moisture re-

sulted from cultivation. At the Utah experiment station it was found that the soil moisture saved by cultivation was 63 per cent for clay soil, 34 per cent for coarse sand and 13 per cent for clay loam.

In order to keep a summer fallow with a good soil mulch upon it and free from weeds, it is necessary to have a spike tooth harrow, a disk harrow and a weeder. I find that a disk does fine service in breaking the ground deep enough to hold a good mulch. The weeder comes in when the weeds escape the disk. This weeder gives great satisfaction when used while the weeds are plenty small. I have one objection to it because it leaves the surface too smooth for the light loams. On the summer fallow it is good practice to have the implements run opposite the direction of the prevailing winds, at the same time consider the grade of your land and favor the conservation of rainfall by running the implements across the slopes rather than with them. On summer crops, such as peas, potatoes and corn, a cultivator with plenty of shovels that can be changed is necessary. It will probably be necessary to order a cultivator made wider than the standard for dry-farming corn on account of the greater spacing between the rows. It has been found, that with the proper kind of summer fallowing and cultivation which the crop is growing that good crops of peas and corn can be raised on the dry-farm.

## Value of Good Soil, Free From Weeds, In Dry-Farming

S. W. Jones.

I am farming on the sandy loam bench land of the Escalante desert where the sage brush grow from two to four feet high where grass, wild beans, match brush and other plants grow abundantly. Soil that will produce abundant vegetation in the wild state is the soil to choose for dry land purposes.

It pays to clean the land well in the beginning. Of many ways of getting the brush off, I have used the rail with best success. After burning the large piles of brush I go over the ground the second time with a machine I made out of oak very much like the old style "go devil" except that the teeth are much longer and set forward with two handles behind to dump it. Hay rakes are often used to gather the scattered brush, but under many conditions they are not strong enough and there is great danger in breaking them.

I usually don't plow very deep the first time; not over six inches. By so doing it is easier to get the roots out and to get the soil in better cultural conditions in a shorter time. Most farmers know how trying it is to prepare a good seed bed when the land is full of roots and sticks. Soil in the wild state is usually free from too noxious weeds, unless it is adjacent to some weed field. So many farmers pay little attention to the few weeds that grow on the newly plowed ground. I have seen on some new farms a few scattering weeds growing unmolested to produce thousands of seeds to cruse the field. I don't know of any one thing that proves the short sightedness of farmers more than their neglect to kill those first few weeds.

Many times it wouldn't take more than two or three hours to hoe all the weeds that will come up on a ten acre piece the first year. It won't take many more than that the second, third or fourth year, if your work is thorough, and you don't plant weed seeds. But let that first years weed crop mature, and in many cases you can't clean that same piece of ground in 20 times the hours. And some men will say in a hundred times the hours. Farmers must not forget that they are under the curse of Adam and that these first few weeds are the beginning of that curse on our efforts to obtain a livelihood from the soil. I would rather have my farm in the wild state in which I found it than have it seeded to weeds like some of the farms not far from mine.

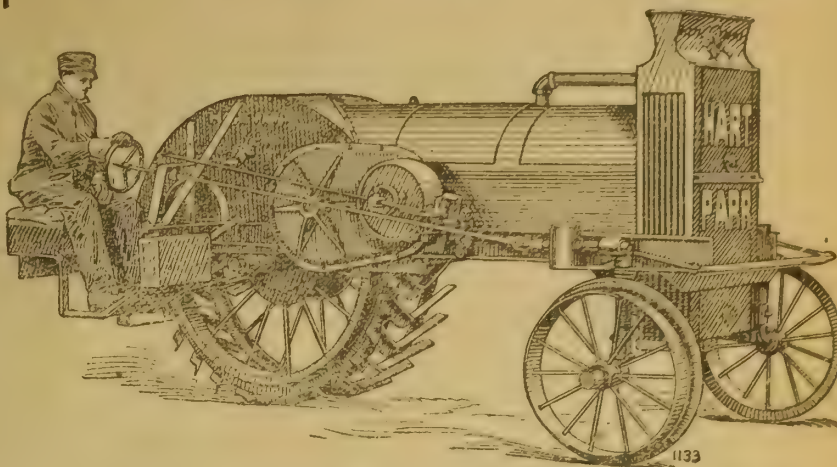
I harrow a little different than some of my neighbors. Many times I ride the harrow with the teeth straight up. In our climate you must have a good deep mulch as the dry winds will rob us of our moisture. I harrow some of my corn ground four times before I plant the seed. I believe there is more in a good seed bed than future cultivation.

For planting corn I use a check rower planter with rows 3 feet 4 inches apart both ways. This is a great advantage over the old method of plowing it in as it plants the seed at the proper depth and also gives us the advantage of cultivating the field crosswise and lengthwise. By all means don't plant corn too thick, two kernels to the hill 3 feet 4 inches both ways is just about right for most conditions in our valley.

In my experience these are some of the big things in the farm business.

### THE OLD RELIABLE

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### THE "LITTLE DEVIL" OIL TRACTOR

This good Little Devil, uses the cheapest fuel oil on the market. Does the work of EIGHT GOOD HORSES. Eats nothing when not at work and does not get tired. It is automatically cooled. There is no danger of freezing or "liming up." Two speeds forward, two speeds reverse, 1½ to 3½ miles per hour. Lightest tractor on the market of same horse power. Does every thing 8 horses can do except consume hay and grain, and drive fast. The ideal tractor for small acreage.



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The profit on your investment depends on the WORK YOU CAN DO, not the time you spend experimenting, that's why you should buy a HART-PARR OIL TRACTOR.

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**SIDNEY STEVENS IMPLEMENT COMPANY,**  
OGDEN AND LOGAN, UTAH  
PRESTON AND MONTPELIER, IDAHO





## Would You Lubricate Your Axles With Watch Oil?

—By The Oil Philosopher.

You wouldn't think of lubricating your axles with watch oil. Well, it's just as expensive and improper to use an imperfect axle grease. A poor axle grease doubles the load for your horses and permits friction to destroy both axle and cone.

Lubrication experts, at the Utah Oil Refining Company, have found that something more than mere grease is necessary for lubricating axles. They are making

## Yankee Axle Grease

with a graphite base. Graphite is a great heat resister and holds the lubricating qualities of the grease together.

The combination of grease and graphite covers the microscopic roughness which causes friction in the most highly polished bearings. It makes a smooth, oily veneer which grows harder and smoother and firmer the more it is rubbed and used.

Don't experiment any longer with greases—"Yankee" always makes good. Go to your dealer and get a can. Give it a trial.

If your dealer is out of stock, don't take substitutes, but write the Utah Oil Refining Company and it will see that you are supplied promptly.

**Utah Oil Refining Co.**  
Salt Lake City

**Fall Rye**  
and  
**Turkey Red Seed Wheat**

LOWEST PRICES

**Vogeler Seed Company**

SALT LAKE CITY, UTAH.

## Weather Conditions and Dry-Farming

By Alfred H. Thiessen, Weather Bureau.

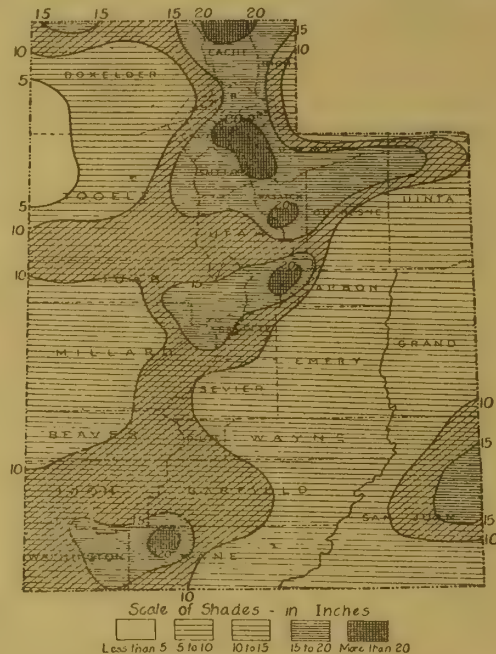
All weather elements should be studied in connection with dry-farming, but temperature and precipitation are the more important.

The annual mean temperature in all the potential dry-farming areas of this State varies between 44 degrees and 55 degrees. Here we have what is known as a continental climate; that is, one which has great variation in temperature, from summer to winter

Utah we have two types of rainfall stations; those in the northern half having the greatest amount of rain in the winter and spring months, and those in the southern half having the greatest amounts in the summer months.

Other weather factors of less importance are wind rection and velocity, humidity and sunshine.

In any section where the rainfall is



and from day to night. The important thing in connection with temperature is to know whether the region in which dry-farming is proposed has a long enough growing season—from spring to fall frosts—to mature a crop. This varies in different parts of the State, but detailed information may be obtained from the U. S. Weather Bureau Office at Salt Lake City, Utah.

Precipitation is the most important factor. The accompanying chart shows the average annual precipitation for the State. The general rule is that land having 10 or more inches of rain in a year may be successfully dry-farmed, other factors being favorable.

In addition to the annual amount of rain falling at a place, it is also important to know how the moisture is distributed throughout the year. In

so small that dry-farming methods must be employed, it is found that there is ample sunshine for plant growth. Humidity increases as sunshine decreases and as rainfall increases. Figures are usually given for relative humidity, which term means the ratio of the amount of moisture which actually exists to that which would exist if the atmosphere were saturated.

As all the factors, wind, humidity, and sunshine have a great deal to do with the evaporation of moisture from the soil, they should be studied with this fact in mind.

Detailed information regarding the climatic conditions in most parts of Utah are available at the Local Office, Weather Bureau, Salt Lake City, Utah.

### A BOOST FOR THE SILO.

The number of silos in Utah are increasing all the time. But we are not building enough of them. Here is a report from Wisconsin that shows the value they are getting out of them:

"So many farmers claim that their silos have paid for themselves in one year that there can be no doubt as to their value. Two striking illustrations bear out this fact. A farmer constructed a 14 in. x 36 in. solid-wall concrete silo four years ago. After he had had this silo completed he heaved a sigh of satisfaction and remarked that would surely last a lifetime and hold all the silage that he would ever want to feed. But the silo fooled him. His profits now were so much greater that in two years he constructed another silo of the same size. In another instance in one of our

northern counties a man was considering building a barn. But at the suggestion of his county agent he built a silo first. The first year he carried the feed to the cattle which were still stabled in the old log barn. At the end of the first year, by using silage as a feed his profits were enough to build his barn. The silo prevented him from placing a "Plaster" on his farm which would have been hard to remove."

Court (to prosecutor)—Then you recognize this handkerchief as the one which was stolen?

Prosecutor—Yes, your honor.

Court—And yet it isn't the only handkerchief of the sort in the world. See, this one I have in my pocket is exactly like it.

Prosecutor—Very likely, your honor: there were two stolen.

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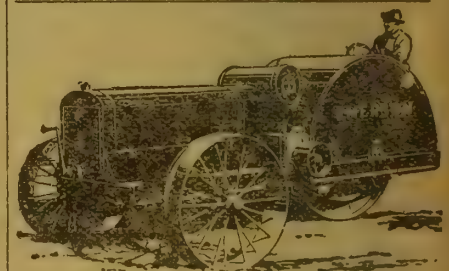
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## THE STORY OF DRY-FARMING AT NEPHI.

(Continued from page one)

Is obvious to those acquainted with conditions then prevailing in Nephi.

At this particular time Nephi was laboring under reverses. She had enjoyed the distinction of being the commercial center of all Southern Utah, but the railroads having been extended beyond her borders it robbed her of this commercial activity and her young men were moving away and the others were discouraged. Her great resource had been cut off and there was much concern as to what would maintain her and keep her populace from seeking homes elsewhere. It was at this time of threatened depletion when this promise of salvation came, hence this mental strife of hope against doubt. We wanted to believe and accept this good message, but we hardly dared do so for fear of disappointment. But in the midst of this confusion of expressed thought, there were some courageous enough to withstand the onslaughts, the attacks, and the ridicule of the populace, and the predictions of some leading men against their success, and secure small tracts of the land and commence operations.

Later these two "beardless boys," Professors J. A. Widtsoe and L. A. Merrill, who had been looked upon with much suspicion and had been dubbed "College Dudes" and "Smart Alecks," induced the county commissioners of Juab County to give the College 40 acres to prove out their new system of agriculture.

Various experiments under the very nose of the farmers themselves gave new impetus and added faith, so that practically all the tract of 20,000 acres was occupied within a few years, and the operations became more successful from year to year.

Since that time many new discoveries in the system of dry-farming have been made, but subsequent years had revealed to the people on the Nephi-Levan Ridge, that sufficient was known to justify the declaration when the message first came to them.

The years have brought a fulfillment of the promise and prophesy. Redemption has come to a discontented people and a prosperity that is permanent has administered to the well being and stability of these communities. Never in all the years has a failure come where the approved methods were followed. The success has been far beyond the promise or the hope held out. About one-half of this 20,000 acres was in crop in 1914, and the very poorest of them gave yields of 20 bushels and over, the whole area averaging slightly over 30 bushels per acre. Many farms produced 40 bushels and over; others 50 bushels and over;

and on one farm a yield of 67 1-5 bushels per acre was obtained of Turkey Red Wheat, on a tract within 1-4 mile of the Experiment Station and on land that has absolutely no moisture influences other than the natural precipitation.

This undoubtedly is the largest yield ever obtained under strictly dry-farm conditions. This yield is supported by the affidavits of six reliable men who assisted both in the harvesting and threshing of the crop. The wheat produced was such a quality that it received first prize for its kind at the State Fair.

This then is the outcome of the message,—the promise—of the two young men who now are justly recognized as the chief apostles of Dry Land Agriculture in the west, John A. Widtsoe, now the worthy president of our own Agricultural College, and Professor Lewis A. Merrill. Surely this is a triumph to their judgment and sagacity. Shall we not all say it is a most glorious vindication of a promise and prophecy? At least they have made a lasting impression upon a grateful people, who now appreciate and participate in the full import of their mission.

We are justly proud of Utah's production in poetry and music, "An Ode to Irrigation," giving expression of triumph and success. Will not some poet and composer in the future produce a similar "Ode to Dry-Farming," that its triumphal achievements may be sung in unison with that of irrigation, and praises be given to the agencies that have wrought such magnificent results?

Will not the lesson of this story be an inspiration and encouragement to other similar districts when a similar message is brought to them with like assurances?

### A Contrast.

Not far from this district there lies a beautiful little valley with climatic conditions and rainfall equally as good; its lands are rich and go to great depths with no legitimate reason why wheat crops could not grow prolific.

In an article recently published this valley boasts of shipping 26 cars of rye. I am informed and I think reliably so, that the average yield was not more than 8 bushels per acre, certainly not more than 10. The price obtained loaded on the cars was 60c per bushel. The maximum could not be more than \$6.00 per acre on an average. Contrast that with an average crop of 30 bushel of wheat loaded on cars same time as the rye at 80c to \$1.20 per bushel. The wheat gave an average maximum crop of \$24.00 to \$36.00 per acre as against rye at \$6.00. The logical deduction is that this little valley was the loser of \$82,000 to \$106,000 by growing rye instead of wheat on its 3000 acres. I report this that it may serve a very practical lesson. My observation convinces me that rye is not a profitable crop for our dry farms. It is true that there are some exceptional yields of rye but it is the exception and not the rule.

I advise against the planting of rye on lands that will grow wheat successfully, excepting it is grown for a forage crop, or a cover crop. If raised for a commercial crop it will keep a poor man poor and make poverty for the thrifty man. It is a lazy man's crop and is as mischievous as an idle brain.



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Utah Horticultural Society, Utah State Dairymen's Association, Utah State Bee Keepers' Association, Bear River Valley Farmers' Protective and Commercial Association, Agricultural College Extension Department and Utah State Fair Association, Utah-Idaho Millers' and Grain Dealers' Association.

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Never bet on a sure thing, if you want to save money.

There is a right and wrong way to do most anything. Be sure your right then go ahead.

Produce more livestock on the farm. It is the very best way to market your crops.

It is harvest time. We are now gathering one of the greatest agricultural crops we ever produced.

Put a song into your work with keen, intelligent purpose, it will give back to you a rich increase in confidence and contentment.

We will mail a number of sample copies of this issue to people who are interested in dry farming. Join the Utah Farmer family. Once every week for a dollar a year.

The first reason for having good milk cows on the farm comes from the fact that they provide the cheapest, best and most wholesome food for the family. Their value is hard to estimate when we consider the amount saved on the bills. Their produce is a superior substitute for many foods necessarily purchased at high prices. In fact, there is no economic way of doing without plenty of good milk cows on the farm.

#### DRY-FARMING.

Encouraged by the favorable reports and success made by many of our farmers, a great many people are coming to Utah, and will engage in dry-farming.

A friend of the Utah Farmer, a man who is particularly interested in the future welfare of our state, suggested that we devote the greater part of one issue of the paper to the subject of dry-farming. Acting upon his suggestion, we wrote a number of successful dry farmers, and in this issue we give their account of the success they have attained.

Dry-farming has come to stay. Many farmers in this state have proved that it is a success. Some have failed it is true, but their failure has been due to one of two causes—either the land was poorly adapted to dry-farming, or improper methods of farming were practiced.

There is considerable land in Utah that is not good dry-farm land, and probably never can be successfully dry-farmed. But on the other hand, there are thousands of acres of splendid land yet available which are capable of producing profitable crops under scientific dry-farm methods.

It is of the utmost importance however, to follow out these methods most carefully. Often a fence, or only a division line, separates the man who is dry-farming at a profit from the man who is losing money. If you will study the difference carefully you will find that one is more thorough than the other in his operations. He plows deep and at the right time, he keeps down the weeds, maintains a mulch to conserve moisture, and selects good clean seed of the right kind.

#### THE HELP OUR DRY-FARM SPECIALIST CAN GIVE.

During the past year dry-farming has received a distinct recognition in the appointment of a state-wide Specialist to look after the interest of all who follow this pursuit of farming.

Under the more favorable circumstances, and where the operators were conversant with the correct methods, dry farming has succeeded reasonably well in this state; but as this institution grew and it was sought to be established in new territory and under new conditions, there were, to be sure, numberless failures, owing to a lack of knowledge and the necessary guidance.

With the appointment of the specialist in dry farming on the Extension Staff of the Utah Agricultural College, it is the privilege of every dry farmer to have assistance on the many problems that confront him from time to time. It is the duty of this Specialist to have dry-farming succeed and to use his powers to

avert failures. Primarily he is to give such guidance to farmers and to districts that will place them on a safe and sound basis and to advise upon what lines they can succeed and produce paying crops. Also to give lessons on economy by advising on the machinery and equipment necessary to operate a farm of any given size; to offer help in planning the farmstead and the operations on the farm; to inspire with confidence and encouragement where conditions warrant; to advise on methods of clearing the ground, the harrowing, the cultivating, plowing, leveling, harvesting, threshing, marketing and in every way give guidance and help to those who need assistance and are disposed to accept same.

Also a very valuable assistance can be given those seeking homesteads, by reporting in a practical way on the quality and possibilities of the lands intended for homesteads; and to those who desire it, to put them in touch with agencies that are reliable and trustworthy, that will put them upon lands of worth and that are adapted to dry-farming.

Many homeseekers heretofore have been located upon worthless lands, and some on good lands where the rainfall is too meager or other adverse conditions prevail that preclude the production of profitable crops. This need not occur in the future if everybody shall know of their privileges and the great assistance offered and provided in this particular.

The creation of this office in the agriculture of our state offers to the dry farming industry a means that will do much to forward its cause and to place the farms on a paying basis, besides obviating the useless squander of energy and money, for want of wholesome direction. It means that every individual dry farmer and every prospective one may have access to the office and services of Mr. J. W. Paxman, Nephi, Utah, the Specialist in dry-farming, by simply applying to him and stating the problems on which they desire information or guidance.

#### THE BEST FARM PAPER.

It is our ambition to make the Utah Farmer one of the greatest helps to Agriculture in this state. It is now accepted by thinking farmers that the paper which serves their interests best, is the local or state paper, and must be edited by men who are close to the soil, and whose knowledge of crops, climate, rainfall, etc., are such that they can write with authority, and help work out the problems that arise daily on our farms. Conditions in New England, or Florida, or even the Middle West, as it is called, are so different to those we have in Utah that a farm paper to be of real help, must deal with our particular conditions.

The national farm paper will always be of some help to any farmer, but the one which will serve his interest the best is the local or state paper.

In order for the Utah Farmer to do the greatest good, we must have the good will and support of our subscribers. You can be a wonderful help, if you will. We want you to tell us how to improve the paper. Tell us where we fall short in being of the greatest service to you. Tell us what departments you would have added, and what ones you are most interested in. We really want to know these things, and we cannot know them unless you tell us. Write us a letter, because we are planning a number of changes and improvements in the paper the beginning of the coming month, and we would like to have your suggestion before that time.

#### THE SUMMER FALLOW

##### ON DRY FARMS.

The success of dry-farming has been dependent on following out certain well defined practices. One of the practices found most necessary is the summer fallow, by which crops are raised only during alternate years and the land tilled during the uncropped summer in order to aid in holding the moisture. Some farmers think that if they leave the land uncropped they are doing all that is necessary. They allow the weeds to grow in great profusion. These remove as much moisture as a crop, so nothing has really been gained by the so-called fallow. The only safe way is to keep the land free from weeds during the uncropped year and to till often enough to prevent the formation of a crust. Tillage should begin early or the weeds cannot be killed by the harrow or disc.

Dry Farming has proven itself a boon to the farmers of this Western Arid Country. It has not been so many years ago when as far as the eye could see on our dry high lands, nothing but sage brush and weeds could be seen.

The first men who suggested that grain could be raised without irrigation were severely criticized, as are all pioneers, but they proved their "Wild Idea" to be a positive fact, and now the golden grain is gradually swelling the bank accounts of those same scoffers and the sage brush has been replaced by wheat and other crops.

Today (Sept. 11th) the County Farm Agents in Utah and Salt Lake Counties have arranged for a trip throughout their Counties. Visiting the better farm and places of interest and studying local conditions from first hands. Weber County farmers will have a similar trip in the very near future.

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## Scientific Methods Brings Good Results

David Hirschi.

Ten years ago I was a pronounced infidel in the matter of dry-farming especially when it was suggested as being possible in this vicinity, living in extreme Southern Utah near the Arizona line, where the summers were long with extremely hot days and sometimes sultry nights, and where the rainfall was irregular and thought by all to be meagre.

My lack of faith, however, was not founded on a rock, but on the sandy foundation of ignorance. And the one extenuating fact relieving my ignorance was that I read with avidity everything on dry-farming appearing in the news papers and magazines, and through their enlightening effect I developed a faith that dry-farming could even here be a success.

Faith led to works and, accordingly, six years ago I determined at any cost to demonstrate for my own satisfaction whether the advocated dry-farming theories would succeed.

So, a few miles south of Rockville, an acre of arid land was fenced, plowed ten or twelve inches deep in May. Too late to get advantage of much of the moisture which had fallen during the winter—harrowed well several times during the summer, keeping the weeds down until about the middle of September when the plot was planted to Turkey Red wheat sown broadcast and harrowed in. In due time the wheat came up fairly well, and although that season was a record dry one, positively no moisture falling from the first day of January until long months after the grain was harvested, the grain grew about two feet high and ripened in June, was cut with a mower, raked up by hand, and hauled about four miles over a rough mountain road, tramped out with horses and cleaned with a fanning mill and weighed up 13½ bushels of good marketable wheat.

This humble though emphatic demonstration was enough. I secured and entered a suitable tract in a body of thousands of acres where I could have neighbors and opportunity for growth, and succeeding in this I have applied myself somewhat to its development.

During the past six years I have grown five crops each of which has been better than was hoped for. The principal crops have been wheat, barley, oats, and corn; although potatoes, beans and squash have been grown with some success.

I have now many neighbors enthusiastically engaged in dry-farming and whose efforts have invariably been crowned with success when they have followed even to a degree the teaching of scientific dry-farming.

On my farm I have one walking and one riding plow, two lever harrows, an interest in each of a 4 horse seeder for planting, a 12 foot header for harvesting, and a disc harrow for destroying weeds. (And by-the-way, this co-operation by agreeable farmers in fencing and implements gives to each at a very low cost the benefit of modern machinery which would otherwise be beyond the reach of farmers with only limited means).

The elevation of my farm is about 4800 feet above sea level. The average annual rainfall may safely be

stated to be between 9 and 15 inches. The soil is a sandy loam with a heavy clay of hard pan as a near subsoil.

We aim to plow 7 to 12 inches deep and to secure an even surface smoothing down the high places and filling up the ravines and depressions and always to maintain a good mulch by the use of the harrow. In late winter and spring plowing the harrow follows soon to prevent the loss of moisture. Planting is always done with a grain drill sowing from 35 to 45 pounds per acre. Nothing but the Turkey Red wheat and Winter Barley are planted for winter crops, and for spring the Red Chaff and the Idaho White Oats. Spring planting however, is not to be encouraged except on land which has been plowed for a year or more, in which case a fair crop may be raised. Farmers who have reversed the above have failed signally.

Next to drouth the weed is the dry-farmer's most deadly foe. They will not thrive on the farm of the successful dry-farmer. Summer fallow land must be kept scrupulously free from weeds.

If those who are just commencing in dry-farming, having the natural requirements, good soil and sufficient rainfall, will follow faithfully and intelligently the principles taught by our leading dry-farm people success will invariably crown their efforts; while failure is just as certain for those who deviate materially therefrom.

Thanks to such scientific men as Dr. J. A. Widtsoe and such practical men as Demonstrator J. W. Paxman, and to such agencies as the Agricultural College and the Utah Farmer. Steel graneries in our neighborhood bulging with golden grain, nice stacks of wheat on every homestead awaiting the threshermen, and fields of green waving corn with the consequent happy and hopeful people attest the splendid results of their labors. They and their collaborators have given not only to this commonwealth but the entire west a great industry or resource which will employ, feed, and make happy present and future millions.

### HE WOULD LOOK A FOOL!

Some years ago an Irish farmer went into an ironmonger's shop to purchase a scythe. After serving him the shopman asked him if he would like to buy a bicycle.

"What is that?" asked the farmer.

"It's a machine to ride about the town on."

"And, shure what might the price be?"

"Ten pounds."

"I'd rather see ten pounds in a cow." "But what a fool you would look riding about the town on a cow!"

"Shure, now," replied the Irishman, "not half such a fool as I'd look trying to milk a bicycle."

### POOR HUBBY.

"You don't mean to say that Dun-geon is dead?"

"Yes, sir; and I married his widow."

"Dear me! you don't say so. Poor fellow!"

"Oh, don't be sorry for him, old chap, sympathize with me."

## ARE YOU COMING?



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# Homestead Lands of The State of Utah

There are several ways of securing homestead lands and Utah and each plan has distinct advantages adapted to the needs of the individual. We give herewith the substance of the laws with reference to the acquirement of homestead lands and the acquiring of title from the government.

Under the old Homestead Act, which has been in force for a number of years and which was modified by the Act of June 6th, 1912, it is possible to acquire 160 acres a vacant government land by residing upon it for a period of 3 years and showing the necessary amount of cultivation, which consists of 1-16 of the entry beginning with the 2nd year, and 1-8 during the 3rd year and each year thereafter until proof is offered. Proof must be submitted within 5 years from date of application. The cost of filing fees on an entry of this act is \$16.00, unless within limits of U. P. or C. P. R. R. grants when costs would be \$22.00.

## Enlarged Homestead Residence.

Under the Enlarged Homestead Act the entryman may file on 320 acres of arid land that has been designated by the government as homestead land. Residence must be taken upon the land and within 6 months the entryman is not allowed to leave the land for longer than 5 months any one year. In 3 years time title to said entry may be secured provided 1-16 of the total entry has been cultivated beginning with the 2nd year, and 1-8 during the 3rd year and until final proof.

Fees for filing the above is \$22.00 unless in above named R. R. limits when the fees are \$34.00

## Enlarged Homestead—Non-Residence.

Under the Enlarged Homestead (Non-Residence) entryman may acquire 320 acres and is required to cultivate 1-8 of the total area during the second year; 1-4 during the 3rd year and this 1-4 kept in cultivation until the end of the fifth or until proof, when title to the land may be secured, provided the entryman lives near enough to the land to personally supervise the reclamation of the land.

By cultivation is meant the plowing and seeding of the lands to some crop other than native grasses. To improve a non-residence claim it will be remembered that the requirements are just double that of a residence claim.

The filing fees are safe as those of residence entry.

Utah is one of the very few states to which the enlarged homestead act is applicable. Under this act any qualified entryman under the homestead laws of the United States may enter 320 acres or 1-ss of non-mineral, non-irrigable, unreserved and unappropriated surveyed public land that does not contain merchantable timber. Under section 6 of the same act, special provisions were made in behalf of Utah, not included in the general provisions of the enlarged homestead act. The particular advantage to this special provision is that an entryman is not required to establish and maintain a continuous residence upon the land he enters.

## Desert Land Entry.

Land may also be taken under the desert entry act. Under this act, any qualified person may enter 320 acres

of desert land. A man and wife may enter 640 acres. The fixed price of desert land is \$1.25 per acre, 25 cents at a time of making entry and the balance (\$1 per acre) at the time of making final proof, which must be made not later than four years from the time of making entry, except in some cases considered reasonably excusable, in which extension of time is granted the entryman. It is necessary that \$1 per acre be expended annually for a period of three years upon the land entered, for its necessary irrigation, reclamation and cultivation. Annual proof of such expenditure, for the purpose set for, are required by the government.

There are still several thousand acres of desert land in Utah that may be entered on under this act. Such land is located in almost every county of the State. As the work on new canal and reservoir projects progresses water for the irrigation and reclamation of such land becomes available and may be obtained from companies that for the purpose of reclaiming contiguous lands have brought it within reach of the desert act entryman.

## The Carey Act.

Another popular land act is that known as the Carey act. Under the operation of this law in Utah, an individual or company must make application to the State to secure from the General Government the segregation of certain tracts of desert lands, and file the necessary maps and surveys, field and water rights and other information to enable the State Board of Land Commissioners and the State Engineer to judge of the practicability of the scheme. The Board must also be satisfied of the financial ability of the applicant to construct the irrigation system proposed. If the project is approved by the land board and the Department of Interior, the State enters into a contract with the applicant, in which the maximum price at which the applicant may sell water rights is fixed, and the State agrees to sell land at 50 cents per acre to the purchasers of water rights. No entryman purchases more than 160 acres. Land and water are paid for in installments.

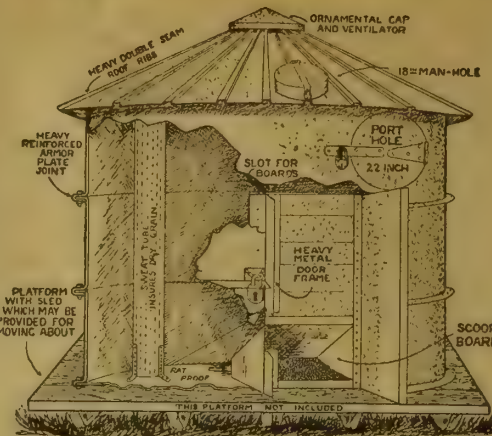
Under the Carey act projects may be mentioned about 98,000 acres of land in Millard, Uinta and Emery counties at elevations ranging from 4,000 to nearly 6,000 feet, and at prices, including water rights, ranging from \$40 to \$125 an acre, the average price about \$50.50 an acre.

## State Lands.

The state is yet in possession of nearly 700,000 acres of school and indemnity lands, which may be purchased directly from the State through the State Board of Land Commissioners at prices ranging from \$2.50 to \$5.00 per acre, some a trifle higher, according to the nearness of water. The State has two reservoir reclamation projects, information concerning which may be obtained by addressing the State Board of Land Commissioners, Salt Lake City, Utah.

Under the Carey act projects may be mentioned about 98,000 acres of land in Millard, Uinta and Emery counties at elevations ranging from 4,000 to nearly 6,000 feet, and at prices, including water rights, ranging from

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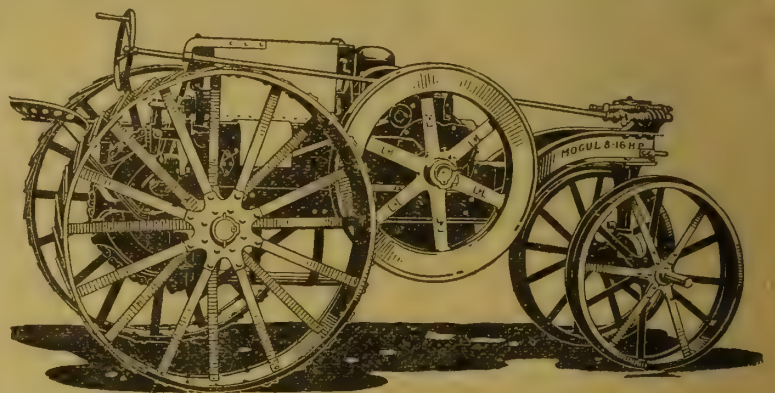
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\$40 to \$125 an acre, the average price about \$50.50 an acre.

### Prices of Farms.

Over three-fifths of all farms in Utah are between 20 and 174 acres in size. The average value per acre of farm land for the whole state is \$29.28. In over half of the counties the value of land averages between \$10 and \$25 per acre, only two counties averaging less than \$10. Six scattered counties fall in the "\$25 to \$50 per acre" class; Weber, Davis and Utah Counties are in the "\$50 to \$75 per acre" class, and in Salt Lake county the average reaches \$78.34.

Of the 22,000,000 acres of land susceptible of agricultural cultivation, only about one-fourth has been appropriated, leaving three-fourths yet to be entered and reclaimed.

## Dry-Farming In Bear River Valley

John P. Holmgren.

Dry-farming methods as we are operating consists of plowing early, say from about April 15 to June 1st, and plow eight inches deep. The reason for deep plowing is to loosen the soil for easy plant penetration of the rootlets and for soil capacity to hold the following winter and spring moisture. We follow our plowing closely with the harrow to disturb the soil surface, which prevents moisture from evaporating and destroys many sprouting weeds from growing. If weeds get too large, which they do sometimes, for the harrow to destroy, we use the spring tooth harrow to destroy them. A disc can be successfully used to destroy the weeds, and will do so better than a spring tooth harrow if the weeds are very large, but that implement turns the soil and exposes the soil to more areation and loss of moisture. Keep the weeds down; save the soil moisture and the fertility that the weeds are sure to use to a considerable extent, and in proportion to the amount the weeds are allowed to use, that proportion is lost for your crop.

During the month of September we seed our wheat land, with 45 lbs of cleaned grain (fanned). Fanning is necessary to cull out cracked and inferior kernels. Vitroling is necessary for most varieties to prevent it from smutting. We use 1 lb. of vitrol, dissolved in water sufficient to properly dampen eight bushels of wheat. This is done by filling a sack two-thirds full of grain and submerging it in a barrel containing the right amount of vitrol solution, remaining a minute or two in the barrel, then held up to drain and placed one side for about 24 hours to partly dry out before it is ready to use in the drill. If a barrel is not available pour the solution on the grain in a wagon box or bin of some kind, and mix it up with a shovel. We drill the grain about two inches deep. If the grain comes up early in the fall, it does not damage it if sheep or cattle eat it off, provided the soil is not muddy.

When spring rains have passed it is a good practice to harrow the grain to disturb the surface of the ground that is probably checked and allowing much soil evaporation. If the stand of grain is heavy, harrow the grain both ways about May 1st. We have medium clay loam soil and also clay loam soil. Proper time of plowing, keeping down weeds and conserving moisture, and proper time of seeding

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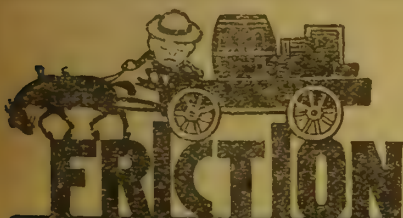
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### IT'S HUMAN.

Tell a man that there are 270,169,325,481 stars and he will believe you. But a sign says "Fresh Paint," he has to make a personal investigation.

helps to insure a large crop. Good farming methods on poor soil, will do as well as improper farm methods on good soil. "The man behind the plow" tells the story like "the man behind the gun." Most plows are all right.



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Excursion tickets with long limits on sale September 1-8-15 at rates as follows: From Salt Lake City to Denver, \$22.50; Omaha, \$40.00; Kansas City, \$40.00; Chicago, \$65.50; St. Louis, \$51.20. Ask for tickets via Salt Lake Route.



## THE HOME

### CANNING TOMATOES

By Mrs. Emily Lowry.

Choose perfect, sound, ripe tomatoes. Place over fire in a large vessel of granite or aluminium filled with hot water until they peel off smoothly. After which, and as soon as possible, return to cooker and cook thoroughly, add a small quantity of salt; have ready glass jars, with large mouths as these are more convenient for filling also cleaning, place these jars in warm water and bring to near boiling point and keep each bottle full until ready to fill with fruit boiling hot, when full run a silver or wooden knife around in fruit to get out any air, bubbles that may be in bottle place rubber and lid on while very hot and seal immediately and as light as possible and until, when turned upside down will not leak or bubble. Do not stand in draughts as it sometimes breaks the bottles. The club canning can be carried on in the same manner in connection with boys to raise the tomatoes, and girls to do the canning. To commercialize this industry one should have an adequate cannery, where a great many cans can be done at one time, and it would make the work easier and more systematic.

### Jellies.

We have two classes of jelly making fruit, those rich in Pectin, such as Ganavas, Crab Apple, Pipin, Quince, Red and White, Currants, Dawson Plums, and Bananas are so rich in Pectin they will form jelly without sugar, but Lemon and Oranges so much free acid and so little Pectin that they need artificial thickening. Large fruit should be cut up and boiled until well done and all small fruits should be washed before the stems are removed, all should be well heated or cooked, for large fruit one quart of water to four pounds of fruit. Use a flannel bag for straining, do not press bag but give it time to drip. For crabs and currants take one measure of sugar to one measure of fruit and boil about twenty minutes, and apple juice one-half hour, all jellies should be boiled in small quantities. Place jellies in sterilized glasses cover with window pane until set, take oiled or plain writing paper dipped in white of eggs placed down on jelly set in cool clean place, will keep indefinitely.

### SWEET PICKLES

Peaches, pears, large plums, melon rinds, are all delicious when made into sweet pickles. The proportions are, seven pounds of fruit, five pounds of sugar, one pint of vinegar, one cup of water, two-thirds cup of stick cinnamon, half as much whole cloves. Remove the blossom end, but not the stems of pears; do not peel; peaches should be plunged into scalding water to remove the thin skin, as we do tomatoes; plums are halved and seeded; watermelon rinds are peeled free from the green rind and from the red inner portions, using only thick white rinds cut into small cubes or long strings. Make a hot syrup of the sugar, vinegar and water, boiling in it the bag of spices. Scald the fruit you use for three consecutive mornings by placing the fruit in earthen jars and pouring the boil-

ing liquid over it; let it stand until the next morning, drain, reheat the syrup, and return the boiling syrup to the fruit. On the third morning boil the juice, and while boiling hot pour over the fruit and seal, leaving in each jar its bag of spices. The fruit must be entirely covered, and kept covered by the syrup at all times, weighing it down with a plate, if unsealed. Some housewives boil fruit with the syrup the third morning, barely heating it through, then returning to jars and putting away, covering closely to keep out the insects. Large mouthed jars with lids are best for these fruits, and the lids should be covered with melted paraffine.

### HOUSEKEEPER WHO KEEPS MILK PURE TAKE CARE.

To take the milk in at once and place it in the refrigerator.

To keep milk and cream cold until ready for use.

To wrap the bottle in a wet cloth, if ice is not available, and set in a dish of cold water by an open window, but out of the sun. The evaporation of water will keep the milk cool.

To use the milk directly from the bottle as needed.

To put no milk or cream back into the bottle after it has been poured out for use.

To clean utensils first with cold, and then with boiling water; to thoroughly drain, and cool them before filling with milk.

To have a separate bottle of milk for the baby.

### TO DISTINGUISH

#### LINEN FROM COTTON

Linen is hard to distinguish from cotton especially when the cotton is mercerized or the material heavily starched and well finished.

If the threads are carefully examined it will be found that the cotton thread is the more exact in twist, becomes fuzzy when rubbed between the fingers and when quickly broken the tufted ends usually curl up.

The linen fibers are long and when spun into thread are strong, smooth, and lustrous. These threads are rather irregular in appearance and break with the straight uneven ends.

When burned, the ends of cotton thread spread out like a paint brush, while linen threads are even and compact.

A drop of glycerine on linen causes it to become more transparent but does not effect cotton in the same way.

When torn the linen gives shrill noise, the cotton has a duller sound.

There are several chemical tests for distinguishing between linen and cotton but these are not practical for the average house wife and are not always sure. The microscopic test is the only one which is absolutely certain in all cases.

If one wishes to be sure she is buying linen, it is well to remember that one seldom gets linen when paying cotton prices—Charlotte E. Carpenter, Colorado A. C.

What does it avail a woman to have troubles if she can't tell them?

And many a man has discovered that he is married to his boss.



## "John"

"We are almost out of chocolate. Get a 3-lb. can of Ghirardelli's Ground Chocolate. Don't buy the bulk kind."

And John "obeyed orders" cheerfully, for of all the members of the household, John, the "boss," likes his breakfast cup of Ghirardelli's the most.

He knows what a delicious, sustaining beverage it is, what wonderful cakes, puddings and cookies his wife makes with its aid. He also knows that it gives the highest food value for the man who works hard, for the woman who must always be well, for children on the grow.

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Is what someone said when we started to make sugar.

Competition is keen for an inferior product. All efforts to make an inferior product or "one just as good" lead the market, are hopeless.

But make a product better than your competitors—build it on the quality standard, and then let the people know of its superior merits, then the results will please.

We have made "quality" our watch-word and have been informing the public of our sugar's merits. Results: A big success.

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### ANSWER

The advertisements in this issue either by asking your local dealer for them, if he does not carry them in stock he may send for them, or you can write direct for catalogue and information. Don't forget to mention the Utah Farmer for we are back of every advertisement that appears in our paper.

## The Tractor On a Dry-Farm; Its Utility, Cost of Operation

Glynn Bennion.

I am convinced that the gas tractor is to become an important factor in the successful farming of Utah's arid lands. In the real dry-farm districts where water is scarce even for culinary purposes the cost of raising forage crops and of hauling feed and water for horses is enormous. These lands may yield under proper treatment from twenty to twenty-five bushels per acre of the best grade of hard wheat, and yet farming with horses is so slow an operation and the cost is so great that the margin of profit to the farmer is very small indeed. With the substitution of reliable motor-driven apparatus for tractive work I am certain that this margin of profit can be greatly increased. I believe the possibilities of the farm tractor to be a subject which should receive the most earnest consideration of our agricultural educators. The gas tractor is evidently as yet in its crude stages of development, and the one thing above all others needed for its perfection is intelligent criticism.

Some time ago my brother and I purchased a 25 H. P. Minneapolis gas tractor, and have been using it for both stubble and sage brush plowing. We figure that it takes the place of about sixteen horses. Up to the present time this season we have plowed about four hundred acres. We have also used our engine considerably for railing sage and for pulling cedars. It has performed all these three kinds of work satisfactorily. Farmers as a rule are prejudiced against tractor plowing, but we found that we could plow as well with the engine as with horses. In stubble we easily plowed twelve inches deep, and in sage brush from six to ten inches deep. Our soil is a heavy fed clay.

In the spring when the ground was soft the engine burned a little over two gallons per acre of distillate costing eight cents per gallon. Later in the season when the soil became hard and dry the consumption of distillate increased to three gallons per acre. The cost of lubricating oil amounts to about seventeen cents per acre. So far the repair bill has been very small. Working one shift a day the engine plows about eight acres a day. These figures apply to plowing which averages eight or nine inches deep.

There are five gas tractors at work in this locality, three of which are giving entire satisfaction. The other two are failures. It is interesting to note that the first three machines are being operated by the farmers who bought them, none of whom have had previous experience with that class of machinery, while the two engines not giving satisfaction have been run by hired engineers. The successful owners simply made a careful study of their machines, and after passing through some heart-breaking experiences, learned to handle them properly.

One other thing, the agent who sells you a gas tractor will tell you the simplicity of the machine is such that a boy can operate it. But I would strongly urge that children or other irresponsible persons be kept away

from the engine. It takes a man, and one who is "right keen on the job," to run a gasoline engine successfully. The reader will kindly pardon the egotism of this last statement.

## Some Results Obtained In Dry-Farming

Geo. A. Adams.

As long ago as 1895 Bp. F. I. Jones and Wm. Hyde experimented in dry-farming in the Monticello district, using Sonora wheat, but nothing worth while was accomplished until the experimental farms authorized by the legislature of 1903 through the solicitation of Dr. Widdsoe had taught their lesson.

I planted three acres of Tofthouse wheat in 1905, paying \$6 per hundred for the seed, without summer fallowing, and the crop didn't even come up on account of the drought. The next year I tried again with eight acres and harvested the first crop raised in San Juan by dry farming, getting 25 bushels per acre. My harvests have never gone below that yield any year since. The high water mark was reached last year when one hundred acres yielded me 4800 bushels of Turkey Red wheat. (During these years the price of wheat ranged from 2½ to 3 cents a pound. Of course my success during these years is owing largely to deep plowing and summer fallowing the land).

I experimented with winter oats in 1909, but the spring frosts took the crop as the snow melted in March. After failure such as mine others also have been deterred from planting oats in the fall. I have raised spring oats since 1910 raising 300 bushels on 100 acres and another year 50 bushels per acre on 25 acres. Oats sell for 2 cents now but have been as high as 3 cents.

I should advise the planting of alfalfa on land that has been used for at least one crop so that all native grasses are killed out.

I have taken 1½ tons per acre, the value of which is \$10 a ton. But the great income from alfalfa is in the seed. Mine has yielded me 500 pounds per acre the equivalent of \$65. I sowed the seed and harrowed in the spring, but better results may be secured by planting in drills and cultivating between them.

For all my crops I have plowed from 8 to 12 inches deep. I have now 400 acres under cultivation.

The proper summer fallowing is the most expensive of all our dry-farming operations on account of heavy weeds. I harrow as soon as the ground is dry enough with a spring-tooth harrow to mulch the surface or else use a common U bar harrow; about the middle of June I go over it again to kill the weeds using a spring-tooth and again the middle of July. With four horses to a harrow I cover at least 10 acres in a day.

For fall plowing when dry and hard, it is well to use a disc plow. In the spring a common mould board. The cost of plowing is \$3 per acre. On my farm I use ten head of horses averaging 1400 pounds. In the past grub-

bing cost \$5 to \$6 an acre. Arthur Hurst of Blanding has invented an excellent grubber with which land is cleared for \$3 per acre. The entire expense of raising a crop is about \$11 an acre.

For five years I have planted Turkey Red exclusively and all the big yields in this section are of this variety of wheat.

The Deering is my favorite binder.

On my farm I have one hundred head of full blooded Herefords and sell the calves when six months old for from \$75 to \$125.

## Pattern Department

Full directions for making as the quantity of material required, accompany each Pattern. Price of each Pattern, 10c; no extra charge for postage. When ordering, all you have to do is to let us know your name and address, the number and size of each Pattern you want, enclose 10c for each pattern, and address all your orders to: PATTERN DEPARTMENT, THE UTAH FARMER LEHI, UTAH.



7349—Children's Rompers or Creeper. Cut in sizes ½, 1 and 2 years. The rompers button at the leg seams. Price of patterns 10 cents.

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7348.—Children's... Under-Waist... and Drawers. Cut in sizes 2 to 14 years. Lawn, nainsook or muslin can be used for these garments. Price of pattern 10 cents.



## SELECTING A DRY-FARM— DRY-FARM METHODS

(Continued from page one)

ture, however, every effort must be made to conserve it or success is impossible.

There is nothing mysterious about dry-farming. It is simply good farming under adverse conditions. The principles of good husbandry that have been understood for generations are applied in helping to make the limiting factor of water shortage less severe.

### Selecting a Dry-Farm

In selecting a dry-farm the first thing that must be kept in mind is to get a region where the rainfall is sufficient for crop production. It should be at least twelve inches during the year, and much better results may be expected if it is eighteen or twenty inches. The rainfall should be distributed in such a way that it will be favorable for crops. For example, if it all fell in a few torrential rains in the fall of the year the greater part of it would be wasted by running off the surface and by evaporation from the soil before the next year's crop could use it.

After being sure that the rain fall is favorable, the soil should next be carefully examined. A good dry-farm soil must be deep, in order to store sufficient water. A soil that is only one or two feet deep and underlaid with coarse gravel can never be successful. The soil should also be of fine texture. A coarse sand can hold but a small amount of water, so it is advisable to select a loam or clay loam. A soil that is too heavy is not good as it is difficult to till and successful dry-farming requires a great amount of cultivation. The natural vegetation is one of the best methods of judging a soil. Such questions as nearness to market, the availability of water for culinary purposes and for animals must always be kept in mind in making a choice.

### Dry-Farm Methods.

The price of success in dry-farming is thoroughness in all operations. The plowing, harrowing, seeding, and weeding must all be done with great care. Failure to do this may mean failure of crops. It is a good thing to break up the land a year before it is to be seeded in order to accumulate sufficient moisture in the soil to raise a crop. The hasty seeding of land immediately after it is broken has resulted in very many failures. The virgin soil is likely to be so hard that it does not absorb rain as readily as after being plowed.

In planting a crop, the mistake of using too much seed is often made. Experience has shown that, where

there is a good seed bed, only about half as much seed should be used as under irrigation. When the stand is too thick the plants use all the moisture while young and there is none to mature the crop.

The practice of leaving the land fallow every alternate year to accumulate moisture has been found necessary in regions of scant precipitation. Summer fallowing is especially successful where the greater part of the precipitation comes during the winter months. The fallow should be kept free from weeds which use as much moisture as a crop. Deep plowing, the use of good seed, the keeping of a good mulch on the soil and numerous other details must be looked after to insure success.

### Future of Dry-Farming.

The future of dry-farming is full of promise. The past has recorded failures as well as successes; but these failures can be used to mark danger points and to help in finding better methods. Millions of acres of land in the arid regions will yet be made to raise profitable crops by the use of dry-farming methods.

### DRY-FARMING AT KANAB.

Five years ago no farmer had been so "unreasonable" as to try to produce crops in the "desert" around Kanab without irrigation. Today there is scarcely an unbeliever in the community and not one homesteader has failed to make the necessary cultivation to secure his land under the enlarged homestead law. Corn and wheat by the hundreds of acres have taken the place of sagebrush and cactus.

Among the most successful dry-farmers of this region is I. H. Chamberlain, who is now in charge of the Experiment Farm located at Kanab. His experience is a good sample of the best in the vicinity, so we refer to his farm for details in this writing.

Mr. Chamberlain has a 320 acre dry-farm east of Kanab. He is cultivating an average of 100 acres each year and is harvesting good yields of wheat, corn, rye and barley. Last year, 1914, 500 bushels of corn were produced from 30 acres of land and a proportionate yield was obtained from other crops. This season the rains are behind schedule and the corn is being cut early for hay.

This is the first crop on the Experiment Farm. Ten acres of Turkey Red wheat, five acres of spring barley, one acre of Sudan grass, two acres of beans, and a few potatoes have been tried. All but the potatoes have yielded good returns. The wheat was raided by "chinch" bugs early in the season, but in spite of that has turned out a profitable crop. Beans promise to be a very desirable dry-farm product.

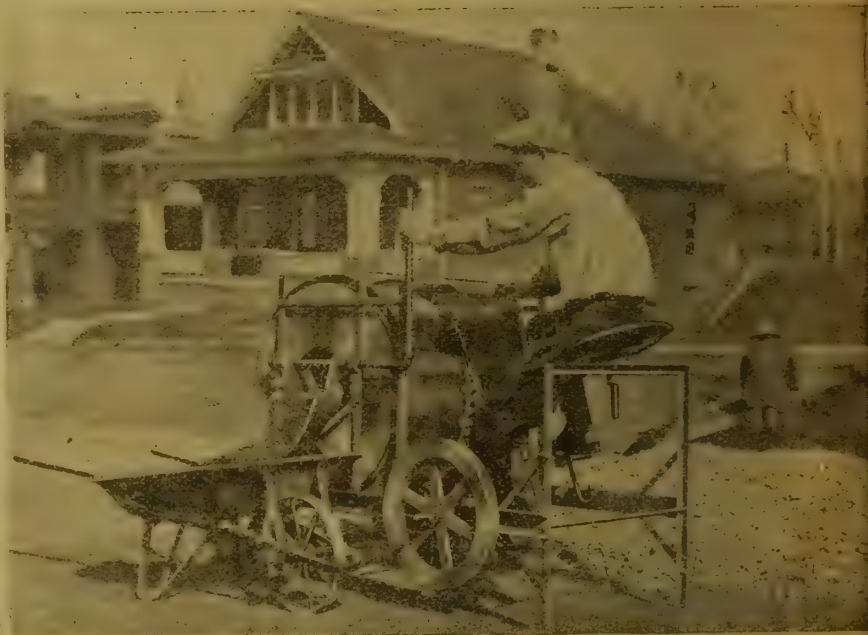
Our soil here, under the Vermilion Cliffs, is a blend of red sand and gypsum which mixed with vegetable mould makes a loam of about the right texture. In depth, it ranges from five to fifty feet. A very easy soil to cultivate either in dry or storm seasons.

The plowing has been done early in the spring or late in the fall. It has been demonstrated that the soil must lie at least a few months between plowing and planting. It has been found an advantage to remove brush before the land is broken instead of "plowing it under."

Cultivation is the remedy for the chief difficulty—weeds and crusted surface. The corn was planted with a



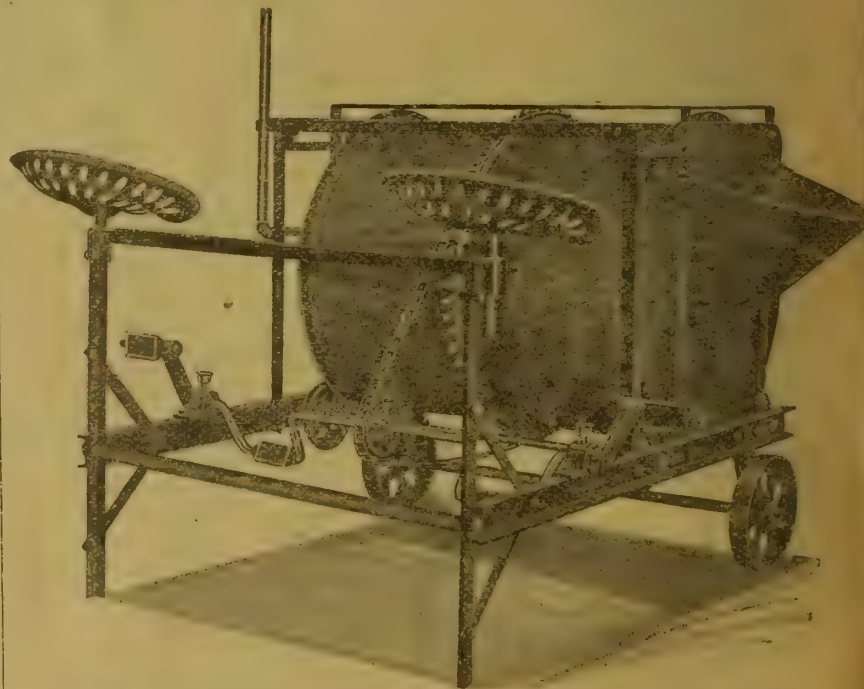
## The Only Practical Manual Power Mixer on the Market



### Special Offer

\$60 Cash—One Man Power—Capacity 3 cubic feet.  
\$80 Cash—Two Man Power—Capacity 5 cubic feet.

Roller Bearing Throughout. Direct Chain Drive. Invented and Made in Utah



CONCRETE PROPERLY MIXED IS PERMANENT AND SANITARY.

We Build Foot Power, Steam and Gasoline Engine Driven Mixers  
Write For Catalogue and Testimonials of Enthusiastic local owners.

**Green Machinery & Manufacturing Co.**

Post Office Box 395

Salt Lake City, Utah

## SEEDS

FOR FALL PLANTING  
Rye, Turkey Red Wheat,  
Vetch and other Farm  
Seeds

DON'T FORGET  
THE FLOWER GARDEN  
Ask for Free Fall Bulb and  
Seed Catalog.

PORTER-WALTON CO.  
Salt Lake City.



double corn planter and laid off with a "checkrow" attachment so that the cultivator could be run both ways. Two cultivations kept the crop free from weeds. Two thorough harrowings in the spring put the wheat in good condition.

The machinery has consisted of moleboard sulky plows, peg toothed harrows, double disc harrow, "Acme" weeder, seeder, corn planter, header, etc. Even the old-fashioned hoe has been employed to cut out some of the

most obstinate weeds.

Mr. Chamberlain has been successful in producing two crops in the three years—wheat, corn summer fallow. He advises against trying to raise a crop every year on the same ground. Winter varieties of wheat planted in the spring have always failed. Rye has proved a nuisance and unprofitable. The right kind of machinery and an abundance of horse power are essential next to the soil and rainfall.

## Club Work and The High Schools of Utah

J. C. Hogenson.

When Club Work first began in our State about three years ago, we tried to use the same methods of enlisting the high school boys and girls as we did in the grades. Not only did we use the same methods, but we also offered them the same lines of work to follow. In some cases we were successful but in most cases we were not. We found that most of the high school boys and girls objects to being classed with the grades. They began calling the work grade work and refused to enlist in the work. We then decided to divide the work into Junior and Senior work, the Senior work being taken up by the high schools. Both classes did practically the same work but they were not classed together.

For a number of years we have had what we call an Agricultural Club and a Home Economics Club at the Agricultural College, to which all college students in Agriculture and home Economics are eligible to membership. They were practically accomplishing nothing at the College, so we conceived the idea of giving them some thing to do by establishing in each high school of the State similar organizations to which the students in Agriculture and Home Economics in the various high schools were eligible. These clubs were to be branches of the clubs at the A. C., thus linking together the A. C. and the high schools of the State. The clubs at the A. C. were to be held responsible for a definite program which the clubs in the high schools were to follow. This work was then turned over to the regular club leaders appointed by the A. C. and U. S. D. A. who were to supervise the work to be given to the high school boys and girls. A man was appointed to look after these clubs, young men's or senior under the title of assistant State Leader in Club Work, and a lady appointed to look after the girl's work, both of these to work under the direction of the State Leader. Mr. Anderson and Miss Parrish have been working just a year now and during five leaders, not only among the high been done.

It has been found that when the students, who are members of the Clubs at the A. C., go home for vacation, they are familiar with the Club work, and usually become very effective that time, much splendid work has school students in their respective communities, but also in the Junior or Grade Clubs. This has helped us greatly in getting leaders for the work.

We have been quite successful too, in getting the Boards of Education in the various districts where High Schools are located, to employ their

teachers in Agriculture and Home Economics all the year, twelve months. During the time that school is not in session, they spend all of their time in the district with the boys and girls who are regularly enrolled in some club project, both in the grades and high school work. We have ten of these people working with the boys and girls in our State now, and they are among our most effective workers too, in getting results, and of course that is what we are after. These people spend at least one day a week among the boys and girls of their district during the season when school is in session. (In two of the Counties of our State, there are men who are regularly employed by the Boards of Education of their respective Counties, who spend all of their time with the boys and girls of the County in promoting Club projects. In these Counties, of course, the Club Work has been most successful).

In this way the various Clubs of the State receive a considerable amount of follow-up instruction and looking after besides what the regular State Leaders can give.

The work which these High School Clubs are doing may conveniently be divided into 1st, the work which they do as a club collectively, and 2nd, the work which they do as individuals. As clubs, the High School boys and girls have, during the past year, carried on a very successful fly eradication campaign, a weed eradication campaign. They are marketing the products produced by the club members, particularly is this true with the eggs produced by the members who are following the poultry project. They are succeeding in making the high schools the social and intellectual centers of the communities in which they are located.

Last winter, a number of successful Farmer's Institutes were promoted by the High School clubs. Probably the one that was the most successful was the one held by the Granite High School, of which Mr. I. B. Ball is teacher and leader. This club undertook to promote a three day's farmer's school. Speakers were secured from the Extension Division of the College and three meetings per day were held. Between meetings, the club gave demonstrations of the proper way of treating seed potatoes, seed wheat, etc., for diseases, rope tying and splicing contests were held. Many things which the club members had were on exhibition. The farmers turned out splendidly and all declared that it was very much worth while.

As individuals, the club members are eligible to compete in any of the

(Continued on page sixteen)



# For Chilly Fall Days

## PERFECTION

SMOKELESS  
OIL HEATER

A Perfection Smokeless Oil Heater is the very thing to keep the house cozy and comfortable in the chilly days before the furnace is started.

This year's new model Perfection has improvements that make it the best heater ever made. Doesn't smoke—doesn't smell. Easy to clean. Rewicking simplicity itself. Easy to carry wherever it is wanted.

### THE CONTINENTAL OIL COMPANY

(Incorporated in Colorado)

Denver      Pueblo      Albuquerque  
Cheyenne      Butte      Boise      Salt Lake City

## By Express To Your Grocer --This Super Quality Bread

No more three-day old, home-baked bread. Sour and soggy bread must go, too. For this is the day of Royal Table Queen, "The Perfect Bread."

Bread that is always fresh, tasty and well baked. Bread that is as light as snow and as tempting as cake. Your grocer receives it each day by express. As soon as it comes, he'll deliver as many loaves as you want. That is if you will leave your order with him; which you will do once you taste—

### ROYAL TABLE QUEEN

THE PERFECT BREAD

It's as highly nutritious as it is tempting.

An excellent premium plan has been worked out, whereby you save the cost of Royal Table Queen. Your grocer will be glad to furnish you details on request.



### An Honest Bread at An Honest Price 100% Pure

## Royal Baking Co., Salt Lake City, Utah



# Oil-Mixed Concrete For Damp Proofing

The admixture of certain mineral oils in small proportions, not to exceed 10 per cent of cement used, does not lessen the tensile strength of mortar; that the decrease in the compressive strength of mortar and concrete is not serious; that concrete mixed with oil takes much longer to set hard, perhaps twice as long, but that the increase in strength is nearly as rapid in the oil-mixed material as in the plain concrete. The use of oil does not make the concrete impervious to heavy water pressure, but it does make it practically non-absorbent under low heads. These are the results obtained by the Department of Agriculture.

The value of oil-mixed concrete is said to be particularly great in the construction of basement floors and walls, watering troughs, cisterns, barns, silos, and in all parts of concrete structures that are to be made damp-proof.

The oil should in no case exceed 10 per cent of the weight of the cement and for the most part, 5 per cent is all that is necessary. Since a bag of cement weighs 94 pounds, 4.7 pounds of oil, or about 2½ quarts, should be added for each bag of cement used in the mixture. The sand and cement should be first mixed with the proper amount of water into a stiff mortar, to which is added the correct amount of oil, and the whole mass again thoroughly mixed until all traces of oil have disappeared. Particular care should be taken to insure that the oil is thoroughly incorporated in the mixture and the time of mixing should be practically double when the oil is not used. For this reason a continuous mixer should not be used in oil-cement-concrete work, as it is difficult with this type of machine to increase the time of mixing sufficiently.

The kind of oil is also important and the following technical specifications are suggested in order to prevent the use of certain oils which might tend to impair the strength of the mortar or the concrete.

(1) The oil shall be a fluid petroleum product and shall contain no admixture of 25 degrees C.

(2) It shall have a specific gravity not greater than 0.945 at a temperature of 20 degrees C.

(3) It shall show a flash point of not less than 150 degrees C. by the closed-cup method.

(4) When 240 cc. of the oil is heated in an Engler viscosimeter to 50 degrees C., and maintained at that temperature for at least three minutes, the first 100 cc. which flows out shall show a specific viscosity of not less than 15 nor more than 30.

(5) When 1 part of the oil is shaken up with 2 parts of hundredth normal caustic soda, there shall be no emulsification, and upon allowing the mixture to remain quiet the two components shall rapidly separate in distinct layers.

For practical use the addition of oil will be found particularly useful in the construction of basement floors and walls. Many of these now in existence are continually damp and such a plication of an oil-mixed mortar coat to the old surface. A mortar composed of one part of cement and two parts condition may be remedied by the ap-sand and containing 5 per cent of oil

should be sufficiently nonabsorbent for this purpose.

Watering troughs and cisterns made of oil-mixed concrete should also prove of considerable practical value in the conservation of water. In the construction of barns, where oil-mixed concrete is used, the interior will be noticeably drier than when ordinary concrete is used. Owing to their durability, cleanliness, and resistance to fire, concrete barns are becoming more and more popular, but they suffer from the disadvantage that during a long beating rain the side walls are inclined to absorb much moisture, which ultimately penetrates into the interior. The addition of oil to the extent of 5 per cent of the weight of cement in the concrete used in the side walls obviates this objection. Barn floors can also be constructed in the same way with advantage. A damp-proof floor is warmer because of the lack of evaporation from its surface, and it is also more sanitary than an ordinary concrete floor because of its non-absorbent character.

There are, of course, any number of other types of buildings and structures of all sorts in which oil-mixed concrete may be used advantageously, or, if this is not necessary, a coat of oil-mixed mortar may be applied effectively.

Attention is called, however, to the fact that extreme care in proportioning, mixing, and placing the concrete is absolutely necessary if the addition of any water-proofing agent is to be of value. The process of mixing oil with concrete has been covered by a public patent so that any one is at liberty to use it.

## NEED OF CHEAPER MONEY.

Since the Banker-Farmer Convention held in Chicago some time ago there seems to be considerable interest in many parts of the U. S. about cheaper money for the farmer.

With the growing needs of the farmers, the increased use of farm machinery, and greater demand for better live stock, there has grown up in the past few years an increasing demand for credit for farmers. For some reason which has not been well defined, except for the possible explanation that farmers as a class are not as good business men as they should be, it is generally held by bankers and money loaners in general that the farmer is a poorer risk than the merchant, and consequently the tendency is to charge a higher interest rate. That this is unfair is the contention of many farmers, and there is a general demand for better credit facilities which will include cheaper money.

Many of our leading men disagree as to the best methods to bring this about. It is a problem that must be solved because the farmer needs, as all business concerns do at times, a little capital to help in the business and he cannot afford to pay the extreme high rate of interest.

## EXPERIENCED.

Miller: "Just as Millet and the widow started up the aisle to the altar every light in the church went out."

Mumford: "What did the couple do then?"

Miller: "Kept on going. The widow knew the way."



**REST A WEEK**  
or so at the Beaches  
Long Beach—Venice  
Catalina  
Then see the  
Expositions.

Three Daily Fast  
Trains leave Salt  
Lake City 8:45 a. m.  
1:00 p. m. 5:00 p. m.  
Ticket office 10 East  
Third South  
Phones 3501-3502

\$35.00 to San Diego  
And Return  
Direct  
Tickets on Sale Daily  
Limit 3 Months

\$35 to Los Angeles  
or San Francisco  
Tickets on Sale Daily  
Limit 3 Months

\$62.50 to Los Angeles  
Return via  
Portland  
3 Months Limit

Go via  
Los Angeles  
to the  
Expositions

# Summer Excursion

Via



Following Rates Apply From Salt Lake City.

## EAST

Denver .....	\$22.50
Colorado Springs.....	22.50
Omaha .....	40.00
Kansas City.....	40.00
St. Louis.....	51.20
Memphis .....	59.85
Chicago .....	56.50
Minneapolis .....	53.85

Correspondingly low rates to  
many other points.

## SELLING DATES

September 1, 8, 15, 22.

Limit, October 31.

Stop-overs; Diverse Routes.

## WEST

Portland .....	\$37.00
Seattle .....	44.50
Tacoma .....	42.80
San Francisco, via Ogden, .....	35.00
do. one way via .....	
Los Angeles.....	35.00
do. one way via .....	
Portland .....	53.50
Los Angeles, via South- .....	
ern Pacific .....	40.00
do. one way via .....	
Salt Lake Route.....	35.00
do. one way via .....	
Portland .....	62.50

Side trip rate Los Angeles to  
San Diego and return, via rail  
\$5.00, and via steamer \$4.00, in  
connection with circuit tour  
tickets.

Tickets on sale daily to No-  
vember 30, 1915, inclusive.

LIMIT, three months from  
date of sale, but not to exceed  
December 31, 1915.

## NORTH

Excursions to northern Utah  
and Idaho points, September 11,  
25.

Proportionately low rates from other Oregon Short Line  
Stations—See agents.

**HOTEL UTAH**  
City Ticket Office



For the Buyer

THE FARMERS' MARKET PLACE

For the Seller

THE GEM HERD.

Improved Chester White Swine

The Home of the Western Prize Herd  
My winnings at Idaho State Fair 1913, were 13 first, 3 seconds, champion boar and sow, and champion fat barrow. At a Tri-County fair held at Jerome, Ida., I took all but one second. I have anything wanted in Chesters from a weanling pig to a champion boar or sow at prices all can afford. High class stock. Write me.  
For Reference—all old customers.

GEO. H. LAWSHE.

Falls City, Idaho

FOR SALE

A few choice registered and Grade Holsteins, including a yearling grandson of "The King of the Pontiacs."

GEO. A. DIXON

Garland Utah

WE MAKE WHAT WE CALL

A Debt Reducing Loan

YOU CAN PAY OFF THE PRINCIPAL GRADUALLY.

MILLER & VIELE

FARMS LOANS

803-7-Kearns Bldg.

Salt Lake City.

WHY NOT ADVERTISE?

If you have some pure bred stock and want to sell them, why not use a little advertisement on this page? It will bring results. Try it.

Sheep, Cattle

Stallions, Jacks

FOR SALE

Pure bred Cotswold's, registered and non-registered, in small or large lots. Registered Shorthorns. Beef and milk strains

ROOSEVELT LIVE STOCK CO.

CLEVELAND, IDA.

Edwin Bennion, W. R. Smith.

BUTTER WRAPPERS

We carry a large stock of the Best Vegetable Parchment Butter Wrappers and Especially Prepared Ink for Printing the same. We furnish them Postage Prepaid at the following Prices, money to accompany order.

100 ..... \$ .90

200 ..... \$1.25

500 ..... \$2.00

1000 ..... \$2.75

Send all orders to

THE UTAH FARMER

LEHI, UTAH

"SAFETY FIRST."

1240 acres in high stage of cultivation, well stocked, independent water right, fully equipped with buildings, sheds, barns, farm implements, etc.; all fenced. Located near Richfield, Utah. \$4500.

450 acres, well stocked, highly improved, near Springfield, Idaho; \$15,000. Will take some Salt Lake property.

120 acres, fully equipped, with 93 inches of water. \$10,500. Will take Salt Lake City home as part payment.

THE ALLIANCE INVESTMENT CO.

Was. 443. 11 South Main St.

SALT LAKE CITY, UTAH

IF YOU HAVE A BARGAIN "SEE ME."

One acre, swell modern bungalow, highly improved place, in Bountiful; cost over \$5000; take \$4700 terms or take good city lots.

Five acres good land, 2-room brick, water right, most of land in garden, joins electric line and main highway, six miles north of city. Only \$2100—\$700 cash, balance easy.

Forty acres, east of Sandy, three room house, stable, water right. \$2100 Terms.

32 acres at Farmington, first-class land, primary water right \$200 per acre. Terms or trade for city property.

GEO. W. DANLEY

707 Walker Bank Bldg. Wasatch 2989

SALT LAKE CITY

FOR SALE

55 acres land of which 25 acres are farming land with water right. Located in the mouth of Salina Canyon, one and one-half miles from town. Soil and location suitable for garden truck and fruit. Orchard of small fruit is planted, and just coming into bearing. For particulars address,

G. LORENTZEN

Salina Utah

To Lease

Partially improved farm of 310 acres situated in Park Valley, Utah, near school and store, new house, barn and well. Can be leased for cash or part crop. Owner also has complete farm outfit together with four horses, cow and etc., which can be secured on reasonable terms. Only reliable and practical farmer who can give satisfactory references need reply.

F. A. DRUEHL, OWNER

Care Druehl and Franken

Salt Lake City, Utah

The Brigham Young

University at Provo, Utah

Will begin its Fortieth Academic year, September 23, 1915.

Registration days, Thursday and Friday, September 23 and 24.

CLASS WORK BEGIN MONDAY, SEPTEMBER 27.

WRITE FOR CATALOGUE

All inquires will receive prompt attention.

RICHARDS DEFENDER

The Sire of Durocs With Immense Size, Extreme Length and Bone Excellent Feet.

250 Choice March and April Pigs ready for delivery now. Can furnish Boars and Sows not related to each other.

Also a few Choice Sows bred to RICHARDS DEFENDER and VIRGINIA ILLUSTRATOR, a Giant Son of the 1000 Pound Illinois Grand Champion ILLUSTRATOR, who sold for \$2000.00.

When you buy Durocs buy from an old and reliable firm who guarantee to please you or refund your money.

RICHARDS LIVE STOCK CO.

Successor to Richards Brothers.

VIRGINIA IDAHO

Stop! Look! Listen!

We have purchased N. M. Hamilton's entire herd of pure blooded Jerseys, including his importation from Biltmore Farm. To make room for these we are compelled to dispose of a few choice young bulls. Write at once for pedigree and prices.

Smith Brothers Jersey

Farm

George C. Smith, Manager.

R. F. D. No. 4, Box 51

Murray, Utah

STOCK POISONED BY GRASSHOPPER BAIT

There have been several reports of stock being poisoned by poisoned bran that had been scattered for grasshoppers. It was reported that one man lost three head of horses, while in another section nineteen head of cattle were poisoned. In all such cases that we have followed up, it has always been found to be due to carelessness or lack of knowledge as to how to use the poison. One case that has been frightening many people of that section of the state from using the poison, the person left his corral gate open and the stock ate from the sack; while in another, the poison was placed about the field, one half of a pint in a place.

If properly used, there is no danger whatever of poisoning any stock, unless it be poultry, which should be penned. Scatter the bran as thinly as possible over the ground. Ten pounds should treat from 2 to 5 acres. The hoppers eat it better if there is only a flake or two in a place. Never should there be a mass larger than a grain of wheat thrown upon the ground.

The farmers in the grasshopper sections should not allow these reports to keep them from using the poison. The use of bran is probably the best

means you have to protect this season's crop. There is much less danger of loss from the use of poison, if properly used, than there is from the hoppers.—Geo. M. List, Colorado A. C.

WHEN BUILDING THE SILO, REMEMBER.

That—

Good silage can only be secured by having practically air-tight silo walls.

Silage will keep better in the round silo, as the shape makes possible a more thorough packing.

Smooth and perpendicular walls from top to bottom, prevent air pockets forming which will spoil more or less silage.

Silo walls must be strong to resist the pressure of the silage.

Durable materials are necessary to resist the decaying action of the weather, and of the silage.

The cost of maintenance can be cut down by building the silo of a material that requires little attention.

As silo to be permanent must be fire proof.

The silo wall that will prevent freezing to the greatest extent is the most desirable.—F. M. White.

No candidate is as radical in office as he was during the campaign.



Ask  
for  
our  
Bear  
River  
Valley  
Folder.  
**THEY'RE  
FREE.**



Bear  
River  
Valley  
farmers  
are  
prosperous.  
Own a  
farm  
like  
this.

## A Good Place to Farm

Where you can raise an abundance of wheat, oats, barley, potatoes, sugar beets, alfalfa, apples and fruits and vegetables of all kinds, under one of the finest irrigation systems in America.

This is the famous

## Bear River Valley Box Elder County, Utah.

On 40 good acres of this deep, fertile soil, you can easily become independent.

The climate is ideal. Every farm we are selling is near good schools and within 1½ miles of railroad. Good towns on all sides. No

pioneering. The land is all in the highest state of cultivation and ready for immediate seeding.

Abundant full water right is worth over \$50 per acre. Clearing, leveling and plowing the

land has cost over \$35 per acre. With all these improvements, you can get a first class farm for

**\$115 PER ACRE ON TEN YEARS' TIME.**  
Interest at only 6 per cent.

Make a small first payment and your crops will pay for the balance. Ask for our folder, it tells all about the wonderful opportunities for the farmer. Come in, write or telephone.

## Kimball & Richards

"LAND MERCHANTS"

56 and 58 Main street.

Exclusive Agents, Utah-Idaho Sugar Co.

Salt Lake City, Utah.

### CLUB WORK AND THE HIGH SCHOOLS OF UTAH (Continued from page thirteen)

club projects. For the school year 1915-16, we have decided that the High School Club projects shall be limited to two, namely.—Cow testing and seed selection. It is proposed to make the high school club work stand out and become known for the promotion of these two splendid lines of work.

Last year the boys belonging to the High School clubs tested for periods of from one to five months over 400 cows, and as a result many of the border cows have been given an indefinite leave of absence from the farmer's herds. Seed selection too, has been carried on now for a year with the result that in many places good progress has been made. It is proposed to carry this selection on for a number of years of progressive work. The club boys have also done some splendid work with poultry, following the rules laid down at our Chicago Convention.

The Home Economics Clubs have been following the regular club projects in most cases. A Home Management Project has been worked out which includes, among other things, the following lines of work:—(a) Expense Budget, (b) Mothercraft, (c) Home Work, (d) Fly Eradication, (e) Sewing, (f) Canning, (g) Bread Making. A Home Handicraft Project is also under way which will give the

High School girls some splendid work to do for the coming year.

In those districts of the State where there are no High Schools, we are probably more fortunate than they are in most other States in that we have a number of religious organizations that are willing and ready to co-operate with us in promoting the Club work. In the Mormon Church, there are auxiliary organizations known as Mutual Improvement Associations, the purpose of which is to develop the young people along all lines of activity. In the Young Men's Mutual Improvement Association, is a branch known as Vocational Guidance and Half Acre Contests. As club people we are working in co-operation with this branch in promoting the various club projects. In the Young Ladies Mutual Improvement Association, is a branch known as the Beehive Girls. This branch takes up work similar to that done by the Camp Fire Girls. Our club work seems to fit in splendidly with some of the lines of work which these girls are doing, and so we co-operate with them in every way that we possibly can in the promotion of club work. These associations also give us a number of splendid leaders for our work, as in each ecclesiastical ward, there are leaders appointed by these associations for the promotion of the work. In some parts of the State, it is through these associations that we secure most of our leaders, through whom most of the follow-up work is done.

In this way, we are all working together, having only one set of rules in all of the interests that are promoting club work so that boys and girls who are working in connection with the Mutual Improvement Associations are also eligible for the local, county, State and National recognition in the various club projects.

### WAYS YOUR EXPERIMENT STATION MAY HELP YOU.

Mr. Farmer, are you taking advantage of the experiment station in your state. If not, you are losing valuable information which is compiled for your benefit.

Practical farm work is being done continually at the various experiment stations of the country and the results are recorded, and bulletins on these experiments are to be had free.

Even the oldest farmer is certain to encounter some puzzling problems, and by writing to the experiment station he may have them solved for him.

The state carries on experiments for the benefit of the farmers and those in charge of the work are only too willing to give out any information that is wanted.

A trip to the experiment station will be well worth your while, as you will have a chance to see the vast and valuable work carried on there and come to realize what can be accomplished.

Not only crop raising is carried on, but experiments in feeding live stock are being made from time to time and

the results of these experiments may be interesting.

The successful farmer is willing to learn, and he can find no better place than the agricultural college to get the desired information.

Farming is a business which has advanced with leaps and bounds in the last decade, and much of this improvement is due to the good work accomplished at the experiment stations.

These modern methods are tried out and when they are profitable the farmer is informed. Many old farming ideas have been proven to be of little value by the work carried on at the experiment station.

The state spends money annually to further the interests of the farmer and it is up to him to take advantage of the work carried on for his benefit.

Altho the above article was taken from an eastern paper, it can apply to our readers. We know that our Experiment Station at Logan will gladly help any citizen of Utah.

### A COMPROMISE.

"Look here, Hiram," said Si, "When be you goin' to pay me them eight dollars for pasturin' your heifer? I've had her now fer about ten weeks."

"Why, Si, ther critter ain't worth more'n ten dollars."

"Well sposin' I keep her fer what you owe me?"

"Not by a jugful. Tell you what I'll do; keep her two weeks more and you can have her."



630.5  
UT Ag serv

# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region

OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE

VOLUME XII; No. 7

LEHI AND SALT LAKE CITY, UTAH

SEPTEMBER 18, 1915



## Are You Going to The Fair?

There are a number of reasons why you should attend the State Fair. Make it a combination trip of education and pleasure. Nobody needs a vacation more than the farmer—unless it is the farmer's wife. Sharpen up your ideas by rubbing against the other fellow and see what he is doing. You will go back home inspired and stimulated by the things you have seen and heard.



# Cow Testing Association History

W. E. Meyers, U. S. Dairy Division.

Twenty years ago on the 23rd of January 1895, a small group of farmers gathered together at the home of Peter Knudsen in Vian, Denmark, and here talked over dairying, and before the meeting broke up, organized the first cow-testing association in the world. Men had been dairying nearly 2000 years before the birth of Christ, and have been dairying nearly 2000 years since his birth, in other words the human race has been engaged in the dairy industry for nearly 4000 years, and yet only 20 years ago the first cow-testing association was organized. This organization was not effected as the result of a few minutes gossip, but came through the initiative of a woman, Mrs. Frederick Hansen, whose husband, State Counsel Hansen had been testing the fat content of milk produced by different cows of his herd for the past several years.

When the farmers in this little community realized the benefit Mr. Hansen derived from his records, Mrs. Hansen suggested that Mr. Hansen and the farmers in the near neighborhood should organize themselves into an association for the purpose of obtaining a record of the feeding, as well as the milk and butterfat yield of individual cows in the herd, and with these records it was hoped to develop a strain of cows which would produce a large amount of milk rich in butterfat.

This association commenced active operations May 1, 1895, with 12 members, and less than 300 cows. Just recently a report from this district states they now have 24 members and 522 cows. Two men are employed to do the testing and compiling of records.

Just a word now about Denmark. This little country, hardly 15,000 square miles in area, passed through a financial crisis the latter part of the

19th century, the result of which was a reorganization of the agricultural activity. Destructive and extensive wars had drained the resources of the country and increased the national debt, and the farmer, upon whom fell the increased burden of taxation was forced to follow a system of agriculture which would yield the highest possible returns. Beef production had become unprofitable and the good standing of Danish butter made these far-seeing dairymen realize that this industry, if properly and systematically developed would yield a good source of revenue, and so when the first cow-testing association was organized conditions were right for its immediate development, and cow-testing associations came as a result of necessity, rather than some new idea to be merely tried out as an experiment.

So beneficial and helpful was this association to its members, and so startling were the discoveries in some of the herds that the idea spread throughout Denmark and the following year 13 more associations were formed. In 1897 there were 30 associations, and from then on the movement had a phenomenal growth. In 1909, just 14 years after the organization of the first association, Denmark had 530 cow-testing associations, testing 207,000 cows, or about one-fifth of her total number.

Two years after the first cow-testing association was organized in Denmark, Germany took up the idea and in 1909 Germany had 207 cow-testing associations, and from here the movement spread north and west until in 1911 it was reported there were over 2000 cow-testing associations in Europe.

A few years ago there came to this country a Dane who settled in the State of Michigan and there in a creamery he learned our language and our customs, and when the Hon. Mr. Warren was elected governor of Michigan he appointed this man dairy inspector. While acting in this capacity he went to the governor and obtained permission to try to organize a cow-testing association, such as they had in the old country. He was active operations in November, 1905, to see whether such an association could be started and as a result he organized in Newago County, Michigan, the first cow-testing association in this country. It began active operations in November, 1905, almost ten years ago. The man who organized this association is Mr. Helmer Rabild, who is now at the head of the dairy farm investigations at Washington. He is called the "Father of Cow Testing Associations" in this country. From this association, with very little pushing, there are now over 225 cow-testing associations in this country, they being in nearly every State in the Union. In the more advanced dairy districts we find, of course, more progressive dairymen who realize the benefits of this great work and Wisconsin and New York head the list, each having 39 cow-testing associations.

The Working Of An Association.  
An ideal cow-testing association is

These figures tell their story of the results of **SERVICE** combined with **STABILITY**.

Deposits year by year of this bank as shown by reports to the state bank commissioners:

Oct. 9, 1911.....	3,047,929
Sept. 23, 1913.....	\$3,667,569
Aug. 28, 1913.....	\$4,328,583
Aug. 28, 1914.....	\$4,637,327
Sept. 2, 1915.....	\$5,290,702

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It was intended to sell this book for \$1.00, but Mr. Louden says he wants every farmer who is going to build a barn to build right, and for us to send the book free.

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Louden Barn Equipments will make your barn more profitable. Ask for Dairy Barn Equipment, Litter Carrier, Hay Tool, and Horse Stable Equipment catalogs and see samples at your dealer's.

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Where you can raise an abundance of wheat, oats, barley, potatoes, sugar beets, alfalfa, apples and fruits and vegetables of all kinds, under one of the finest irrigation systems in America.

This is the famous

## Bear River Valley

Box Elder County, Utah.

On 40 good acres of this deep, fertile soil, you can easily become independent.

The climate is ideal. Every farm we are selling is near good schools and within 1½ miles of railroad. Good towns on all sides. No

pioneering. The land is all in the highest state of cultivation and ready for immediate seeding.

Abundant full water right is worth over \$50 per acre. Clearing, leveling and plowing the

land has cost over \$35 per acre. With all these improvements, you can get a first class farm for

**\$115 PER ACRE ON TEN YEARS' TIME.**  
Interest at only 6 per cent.

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Salt Lake City, Utah.

one of 26 members. There can be less, but not very well be more, because the tester is to make one visit each month to each member's farm. It is necessary for him to stay there one day, and as there are but 26 working days in the month, it would make it hard for the tester to work for more than 26 members. The members of an association employ a man who is called a tester. He is a young man who has been born and reared on a farm, and who has had practical experience in dairy work and if possible several years of training in our agricultural colleges. He is not only able to weigh and test milk, but understands feeding and balancing of rations and who has some good ideas in regard to dairy farm management.

I believe that the tester is worth fully as much to the members in the work he does on balancing rations and in discussing the herd management as he is in obtaining and computing the actual producing capacity of each cow.

The tester comes to the farmer's place about three o'clock in the afternoon; he is there in plenty of time to watch the feeding and to weigh the quantity of feed fed each cow. The general practice of feeding the cows comparatively the same amount of roughage makes the work easy to complete. However, where cows receive different amounts of feed, this is all noted and recorded in the barn note book, provided for the purpose. All this is done by the tester, the farmer

usually aids him in getting the feed samples ready but he does not need to. Then as each cow is milked the tester weighs and records this in his barn note book and also takes a sample of the milk. In the evening we usually find the farmer and tester discussing the feeding of cattle, the testing associations in general and the relative value of protein concentrates. Much good can be gotten from these discussions. In the morning the operation is the same as that of the preceding afternoon. After breakfast a test of the samples of milk taken are run. After this has been done the records are all copied in a permanent record book, which gives the following information: The amount of milk and butterfat the cow has produced, its value, the amount and cost of feed consumed, the profit or loss, the cost of producing a pound of fat or a cwt. of milk. This information is recorded neatly in the cow-testing association record book.

The tester's outfit consists of a twelve-bottle tester, glassware, a pair of 60-pound scales, a milk chief and pail, which are usually furnished free of charge by the dairy department of the agricultural college of each State. The stable books, individual record books and loose leaves for the ledger are furnished free to members of each association by the Dairy Division of the U. S. Department of Agriculture.

The charge for each member is an association is \$1.50 per cow.

## Select Seed Potatoes For Next Year Now

By Dr. George R. Hill, Jr.

This season has again demonstrated three vital things concerning the potato crop:

1st. That diseases are widespread over the State, and in an alarmingly percentage of cases have ruined the crop.

2nd. That where careful seed selection, and seed treatment and rotation of crops have been followed, these diseases have been very greatly reduced, and in some cases almost entirely eradicated.

3rd. That poor scrubby unselected seed produces scrubby, ununiform, poor yielding potatoes, even though the diseases are eradicated by proper treatment.

The seasons work has been a splendid demonstration of the value of proper methods it has determined scores of farmers who have made failures to follow the methods of their neighbors who have succeeded. It has determined those who have succeeded this year to raise even better crops next. Now is the time to start. How?

Right NOW, before frost comes, is the time to begin the work of potato seed selection. Plants infected with Fusarium Wilt are, for the most part wilted, dead or dying, or appear ab-

normal in some other way in many fields particularly those in which the seed was selected against the disease last year, the percentage of these diseased plants vary from 1-5 per cent in some cases to 10 per cent in others. If more than 10 per cent of the plants are diseased with Fusarium Wilt, the potatoes should not be used for seed. Fields in which the percentage of diseased plants is less than 5 per cent should be carefully gone over and all the diseased plants should be dug, and the potatoes removed. Such potatoes are good for food, but would ruin the remainder as seed potatoes if allowed to remain. Now, before the frost, the diseased vines show up distinctly, and can be removed almost completely. All growers who expect to sell seed potatoes should see that this is done NOW. The Rhizoctonia which will be found as minute black spots on the potatoes remaining in the field can be controlled by seed treatment. Each grower should avoid the scrubby poor-yielding potatoes by selecting his own seed potatoes now in the field after the diseased plants have been removed, and before frost comes. To do this he should go through the field





## Prolonging the Lives of Your Horses

—By The Oil Philosopher.

The question of lubrication does not end with difficulties you encounter in machinery; it goes deeper. Your horses, your harness and your pocket book are affected.

You'd be surprised how much extra energy an inferior lubricant drains from your horses, the extra strain on the harness and the wear and tear of your wagon and machinery. It amounts to many dollars.

## Yankee Axle Grease

is more than just Axle Grease. It is built on a graphite base and holds the grease under pressure where it will cool the bearings with the velvet film it forms on the axle in the cone.

Discard the axle grease you are now using (if it is not "Yankee"), thoroughly wash the parts to be greased, and apply Yankee Axle Grease. We are not fearful of your decision. The only disappointment you will experience will be that you didn't discover the efficiency of "Yankee" sooner.

For sale everywhere. If your dealer is out of stock, you will receive prompt service by writing to the

**Utah Oil Refining Co.**  
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**Fall Rye**  
and  
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LOWEST PRICES

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with some stakes. A stake should be placed at the normal vigorous vines, which from their habit of growth seem to be true to the variety which the grower wishes. These staked hills should be dug by hand before the balance of the field is dug. These strong thrifty vines will probably have several good sized uniform smooth potatoes. If they do not they should be discarded. Only those which yield several uniform smooth potatoes true to type, and free from disease are worth selecting. Like tends to produce like. A hill with seven or eight fine potatoes will tend to reproduce similar hills next year. Those which have but two or three potatoes will tend to produce that type. Only those hills which conform to the ideal which the grower has should be kept. These selected potatoes should be planted in a plot by themselves, and every precaution should be taken to keep them free from disease. It is best to keep the potatoes from each selected hill separate or at least those from the best

hills separate. These should be planted in rows to themselves, and stakes placed in the seed plot to show which hills are planted from the original mother hill. In this way the best yielding hills can be selected and kept separate, with the result that the yields will be greatly increased. However it is not practical to select by hand enough seed for a large field. But remove all diseased plants now, and select enough good high yielding disease free hills now to furnish the seed for the seed-plot next year. From the seed-plot the large field can be planted next year. Every farmer should have a seed plot every year. The farmer who wishes to grow potatoes should grow pure seed, keep it free from disease, and select it carefully, in such a way that it will always be improving. Careful selection in growing potatoes is just as important as it is in raising fine cattle or sheep or hogs, or horses. Select the best, grow only the best, and make the best better.

## All In Readiness For State Fair

Utah's great State Fair is ready for its formal opening Monday, September 27th, in Salt Lake.

With the great grounds beautifully decorated, with thousands of dollars worth of wonderful and beautiful exhibits housed in teaming structures on the State Fair grounds, Utah's greatest annual exposition will swing open its gates on September 27th, under more auspicious circumstances than have ever before attended the opening of a State Fair.

It will be the most remarkable and stirring assemblage of the products of Utah's mines, mills, fields, and schools, any western state has known in many years.

The great horticultural building banked high with the State's most beautiful fruits and vegetables and grains; the mineral building with its vast exhibits of Utah's mines; the manufacturers' building with its scores of booths the merchants' building; the woman's department; the fine arts and crafts division; and the great livestock show with its hundreds of blooded horses, swine, cattle, and poultry—offer the greatest educational attraction in the history of Utah's State Fairs.

Reports from all over the state indicate that many thousands will attend this year's State Fair in Salt Lake. The reduced rates on all railroads, and the fact that the fair is to be held for 10 full days, beginning Monday, September 27th, and closing Wednesday, October 6th, is attracting many additional visitors.

The automobile races on the mile dirt track on the Fair Grounds the first three days of the Fair, Monday, Tuesday and Wednesday, will find ten of the biggest automobile racing drivers in the world behind the steering wheels of 300 horse power automobiles. Irwin Bros. Wild West Shows, with 250 head of stock and over 150 cowboys, cowgirls, and Indians, is to show twice daily; Lucille Belmont, the daring aerial wonder, will make balloon ascension daily and return to earth in there separate parachutes. In addition to these attractions, over a dozen other sensational shows have been secured for free open-air exhibition in the afternoon and for the

big shows in the arena of the coliseum at night.

Never in the history of Utah's State Fairs have so many entries been received in the livestock department.

On every hand is heard the prediction that this year's fair will be the largest in the history of Utah.

### INOCULATING ALFALFA

Pleasant Grove, Utah.

Utah Farmer:

As I am desirous of planting my farm about 20 acres in alfalfa I want a little advice.

What is meant by inoculating alfalfa? If necessary how can I do it. What advantage is there in doing this and why?

Answered by F. S. Harris.

In order for alfalfa and other pod-bearing crops to thrive best it is necessary for them to have nodules growing on their roots. These nodules are caused by bacteria which live on the roots and fix nitrogen from the air in such a way that it becomes available to plants. In soils where these bacteria do not exist it is desirable to add them either in the form of pure cultures from the laboratory or in soil which is known to contain them, such as that from an old alfalfa field. This adding of bacteria to the soil is known as inoculation.

Practically all soils in the older settled parts of Utah already contain the alfalfa bacteria; hence inoculation is unnecessary. It is only on new tracts and in section of the country where alfalfa has never been grown that it has to be resorted to.

### "GET OFF THE BAILS."

"Young man, do you guarantee this stuff to kill beetles," enquired the old lady in the chemist's shop, of the assistant who was "busy" reading the latest war news.

"Er—er—positively, ma'am," replied the "busy" assistant.

"I don't see any directions on the bottle, how is it used?"

"Shake the bottle and take a spoonful three times a day," was the absent-minded reply.

Many a man who is well off is well on in years.



## EMERSON Farm Tractor

Model L—12-20 Horse Power

A four-cylinder, 2-speed light weight tractor of great power, suitable for any size farm. Will pull the implements you now have on your farm—gang plows, harrows, mowers, binders, manure spreaders, road drags or graders. Will also operate your ensilage cutter, feed grinder, circular saw, etc. Does more work than horses—costs less and is so simple anyone can run it.

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100,000 farmers will attend and exchange ideas. U. S. Government, 17 Western States and Canada will exhibit farm products raised with and without irrigation. See the largest Tractor Plowing Demonstration ever held. Implements exhibited will include everything the farmer needs to make his work easier and more profitable. Speakers will cover all subjects vital to the farmer and his family. We want you to come. Ask questions. Make suggestions. Address INTERNATIONAL DRY-FARMING CONGRESS, DENVER, COLO.

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# Why I Expect to Be a Farmer

By Ronald Sepherd. A Prize Essay in a Contest For Boys on this Subject

I do not believe there is a more honorable occupation under the canopy of heaven. Nowhere else can the beauties of nature be so fully appreciated. The green meadows, waving grain, and thrifty live stock, present a picture the poet is at a loss for words to describe. The farmers have a great future. The opportunities are never more promising for the present and future agriculturist, for the valuable assistance of the Agricultural Experiment Station; studying the best methods of handling the different soils, testing various varieties of seeds and plants, and conserving moisture, all guaranteed abundant remuneration.

The productiveness of the land is being greatly increased by the farmer knowing its chemical elements. Why do we farm?

The universal answer that is given, for profit," in one sense is true. It is a profitable, as well as independent and pleasant occupation. To my mind to answer that question correctly, one needs only to stand a few minutes on any of the busy thoroughfares of our large cities, and watch the throngs going to and fro. The thought comes to my mind, who feeds and clothes this vast army of humanity?

Thousands of our foreign neighbors have been saved from starvation by the products of the American farm. To help to produce the necessities of life, what greater mission could one perform?

Farming is an art.

A large per cent of the failures experienced every year is attributable to the lack of knowledge of one's business.

Boys are like pencils, they need to be sharpened and pushed before they will make a mark.

My present desire is to enter a four year agricultural course after completing my high school work.

To own and live on one farm that shows prosperity is the height of my ambition. I hope that I will never be guilty of using the slogan "back to the farm" which you hear our city cousins use so often.

Would I exchange places with them and cast my lot with the thousands that are struggling to earn the necessities of life sufficient to keep soul

and body together? Emphatically, no! They are denied the fresh wholesome fruit and vegetables, pure air, and congenial surroundings which we enjoy so much.

One of the depressing things about city life is the lack of sociability, for "a great city is a great solitude."

Living to self alone is a narrowing habit to form. Get acquainted with your neighbors—you might like them. The question has sometimes been raised whether the people who live in the country are no drifting apart in these days of fast living and losing some of the finer touches of life, such as characterized the people in pioneer days.

Farming is becoming more attractive many ways. By the labor-saving machinery, rural free mail delivery, mutual telephone, and many other things.

City conveniences are being enjoyed at a nominal cost. The auto gives agreeable diversion to the mind and body. After the day's work you can take a spin to town, or a tour through the neighborhood, while the work horses are enjoying their well earned rest.

Every farmer should plan to take a week's outing every fall with his family and attend the state fair. It has so many valuable educational features that you cannot find elsewhere. It breaks the monotony and puts new life into your work. I hope to attend the fair this fall even if I am not the winner in this contest.

We should unite our efforts in protecting the lives of our song birds from the gun in the hands of thoughtless boys, and the wholesale robbing of nests. They are the farmers' friends. Thousands of dollars are saved annually in crops by them in the countless numbers of insects and noxious weed seeds they destroy.

Our grandfathers with their crude implements made farming a drudgery. In fact this would make their energetic sons look at farming with disfavor.

Fifty years ago colleges were not taking up methods of farming as at the present time.

Farming used to be looked upon as a degrading occupation, but now it is a high honor to be classed as one.

## SAVES YOUR CALVES

### AND YOUR BANK ACCOUNT TOO

Listen to what Mr. Beard says:

Blatchford's Calf Meal is the best calf food I have ever known. For raising calves it is just as good as cow's milk, and doesn't cost one-half as much. I can say that it will pay any one over 100 per cent that has calves to raise. I want another 100-pound bag today.

Yours very truly,

L. C. BEARD.

Most users put it even stronger than Mr. Beard.

BLATCHFORD'S PIG MEAL, LAMP MEAL, and EGG MASH are just as good as the CALF MEAL.

You can make just as much money with Blatchford's products as your neighbor.

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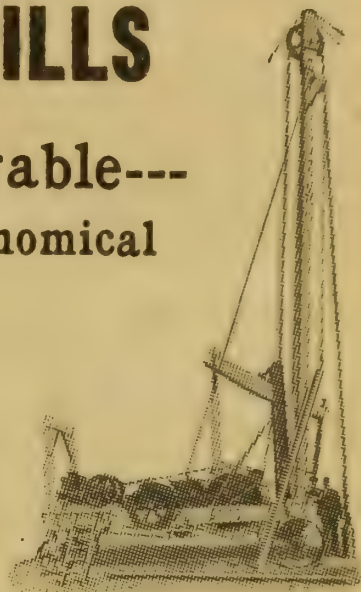
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**ADVERTISEMENTS.**  
We believe that every advertisement in this paper is backed by a responsible person. We guarantee the reliability of advertisers, but we will not undertake to adjust trifling differences between subscribers and advertisers. This guarantee holds only when written complaint is made to the publisher within one week from the date of any unsatisfactory transaction, accompanied by proofs of swindle and loss and within one month of the date of the appearance of the alleged deceptive advertisement in the Utah Farmer, and the subscriber must prove that in writing to the advertiser he said: "I saw your advertisement in the Utah Farmer."

**OFFICIAL ORGAN**  
Utah Horticultural Society, Utah State Dairyman's Association, Utah State Bee Keepers' Association, Bear River Valley Farmers' Protective and Commercial Association, Agricultural College Extension Department and Utah State Fair Association, Utah-Idaho Millers' and Grain Dealers' Association.

When you ask for a change of address always give OLD and new postoffice address.

A pretty sure test of the weak bridge is the threshing machine.

Many farmers have learned the value of a repair shop. One should be found on every farm.

The problem of cheap and satisfactory storage for grain has been solved with the movable grain bins.

Making money is not all there is to successful farming. The home, its conveniences, its beauties and opportunities for life; the soil and its conservation to the future generations in its strength of vigor; the appearance of the farm and sanitary conditions of herd and family all are factors in successful farming.

#### MEET US AT THE STATE FAIR.

We will have an office on the Fair Grounds and we would like to meet as many of our readers as possible. If you want to renew your subscription we will be glad to have you come to our office. If you have any troubles come and tell us about them. If you have any questions you want answered come and see us. Some one will be at the office all the time.

#### A SEVERE PUNISHMENT.

It has been suggested that it would be an extra punishment for some men in the hereafter if they were obliged to spend their nights and Sundays in

the kitchen they provided for their wives. It might be well for some men to think over this idea and share with their wives in purchasing some labor saving devices and improvements in the home and kitchen.

Why is it so many co-operative associations fail? Do they get the proper attention from individual members? A business not worth watching is not worth having. Co-operation is based upon confidence, and where confidence is lacking co-operation must fail. If you can not give an undertaking some attention, some thought and help, stay out of it. You would fail at your own work if you did not do this.

#### ANNOUNCEMENT.

Mr. J. Will Hyde has accepted a position with the Utah Farmer. He will have charge of the Salt Lake office located at 712 McIntyre Building. Phone Wasatch 1067. For nine years he has been a member of the Desert News staff, was City Editor at the time he resigned to accept a position with the Utah Farmer. His experience in the newspaper business and the study he has made of advertising will materially assist us in serving our patrons.

#### THE STATE FAIR

The State Fair this year promises to be one of the best ever held. The officers are hard at work finishing the details so that every thing will be ready for the opening day. There will be just as many fat cows and prancing horses and in many departments the exhibits will be better and more of them. The amusements have been secured with the idea of weeding out the questionable, but there will be fun and thrills with Auto Races and Wild West Shows.

Let's go to the State Fair this year a few days rest will hurt none of us and the many things to be learned by seeing what the other fellow is doing will be an inspiration to all of us. The educational value of a trip to the State Fair is well worth the time and money spent.

#### BUSINESS TRAINING WILL HELP.

The farmer needs a business education in part of his work just as much as the merchant or banker. Farming is a business, the buying of implements, seeds and other supplies and the selling or marketing of his crops. We have solved to a certain degree how to produce thing but we do not know how to market our crops successfully. We need system in our work. We should know how to keep books or records which will show the cost of doing things.

The essential thing though is not book keeping, but a knowledge of business methods. Many farmers handle more money during the year than

small merchants but do not have the details of accounting such as they do. We are fortunate in Utah for nearly all of our boys and girls can have a business course in our High School or other places. They should take advantage of this before leaving school and secure some business training.

#### PERMANENT TEMPLE

##### FOR IRRIGATION.

The International Irrigation Congress that is being held in California has started a movement for the establishment of a permanent building, museum or temple as a monument to the pioneer irrigators of the west. If the resolution that was introduced at Stockton is passed there will be established a permanent home for this great irrigation movement, in one of the central states of arid America. Sessions will be held biennial at this place and meeting the alternate years at other places. Permanent exhibits illustrating the work of irrigation will be maintained.

Salt Lake City is going after this building. She was the cradle of American irrigation. It was here the congress was first organized in 1891. No other state has given the movement such strong support as Utah. Action on this matter will be taken today at the meeting in Sacramento. We believe our delegates will be successful, to securing for Utah this permanent home or temple to be erected in honor of the pioneer irrigator of America.

#### SEVEN YEARS OF PLENTY

##### OR BUSINESS DEPRESSION.

Newspaper dispatches today give two different points of view from very prominent men as to the after results of the war.

Thomas A. Edison a world-renowned inventor made the following statement.

"Leaving out entirely the question of war industries, activities which are simply a hectic flush and do not give a complexion which indicates the healthy advance of commercial enterprises in the United States, I am satisfied this country is embarked upon a seven-year cruise of prosperity.

"But I am afraid it will be the same old story over and over again; some will attempt to overdo it. Then inevitably will come a recurrence of bad times, although not so bad as we have seen them, because business is now established in this country upon a really sound banking system. People can go safely ahead now with assurance of good times to come, but they must learn to save their money and avoid extravagances.

"The war will likely continue another year, and at its close undoubtedly many survivors will come here to escape the terrible taxes certain to be levied upon them. But there remains

plenty of land uncultivated in this country, and these people, accustomed to intensive farming, will assist us to increase our crops. And that's what we need—intensive farmers. Where we are getting 15 bushels to the acre we ought to get 40. These European farmers can produce the large amounts too."

Former President Wm. H. Taft at a gathering of Ohio bankers at San Francisco warned the business interests that a serious business depression will follow the conclusions of the European war in the United States.

"I do not subscribe to the elation evinced by the headlines of the press over the harvest of dollars by reason of the war. The reaction will be much more severe."

The former president declared the present situation of the United States in regard to the war to be "critical," but expressed the belief that it would be smoothed out. He advised the bankers to "reef their sails" in preparation for the prophesied action, as the business stability of the country would rest largely in their hands.

Another writer who has studied history says:

Strange as it may seem, all important wars have been closely followed by periods of great business activity, and the bigger the war the greater the subsequent prosperity. Billions of dollars will have to be spent in rebuilding property that has been destroyed. It will take several years before some of the important manufacturing countries will regain their former export trade, while much of it will be captured and held by this country and bring additional wealth within our borders.

#### MOTION PICTURES IN

##### AGRICULTURE

Every farmer can not go to the College, even to the Round-Ups in the winter, so the college has been going to the people. A new method has been undertaken by the Washington State Agricultural College. They have purchased a motion picture machine and are making pictures from the agricultural, horticultural domestic science, manual training and stock raising departments. These pictures will be taken to every town in the state.

We can see many advantages in educational pictures of this kind. Subjects of vital interest can be brought to the farmer. The experiment station with the results of many years of experiments and study can be shown on the screen and should help every farmer in his work of studying the soil and how to properly work it. The best in most any kind of work can be shown to all. The results of this work at that college will be watched by other states.





## When You Open Your Preserves Next Winter

they will be full flavored and delicious—just as they were the day you put them up, if you seal your glasses and jars with

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Butte Boise Salt Lake City

## Selection of Seed Potatoes

A. B. Ballantyne.

The inspection of numerous potato fields this summer has impressed the writer with the great need of improvement in the supply of seed potatoes and co-relatively, in the method of securing them.

In the great majority of fields visited the stand has been very irregular and the plants growing have been irregular, especially in size and vigor. This irregularity would not be so serious if it did not affect directly the yield of potatoes; for wherever you go a small vine, all other things being equal, produces much less than a hardy vigorous one.

In the past, and even today, farmers are attempting to secure good seed by importing it, or going to their local seedman and buying the culls he is offering as first class seed. In this way the potato industry has been brought to its present deplorable condition and where carelessness and incompetence have been responsible for it so now the only hope of rejuvenating our potato industry lies in the exercise of intelligence and the expenditure of a little patient effort. Let it be stated more clearly, Utah as a state does not need Idaho nor Colorado seed potatoes (their fields generally are as badly diseased as ours) because we have here plenty of good fields from which seed can be selected and moreover these fields are numerous enough so that every town can have some first class fields next year.

How shall we secure this choice seed? Briefly, by selection in the fall before the plants are frozen of the finest and healthiest plants, typical of the variety.

It is done thus. A supply of stakes or sticks that can be easily seen is secured and with an arm full of these the person walks down the rows, pushing a stick into the soil near each plant that looks exceptionally vigorous and prolific and appears free from disease. After the patch has matured the farmer again enters the field and digs these selected hills by hand, carefully discarding those hills in which the potatoes are unduly undersized or not of typical shape, or which have but a very few potatoes. In this selection the farmer will be careful to secure hills having a large number of medium sized potatoes rather than two or three oversized ones. The general market likes good medium sized potatoes and has about as much use for large knobby potatoes as it has for small ones.

Many of our potato growers will feel that they haven't time to do this but the great wonder is that more of this hasn't been done before. It is simple, inexpensive and it is doubtful whether there is a single farm operation that will pay as great returns for such a small investment of time or capital. The writer saw a small patch of hill selected potatoes by the side of one planted from bin seed. The difference in uniformity of plants and freedom from disease was very remarkable, and was a great testimonial to the effectiveness of this operation.

Care should be taken that the selected seed should be dug before heavy frosts and that they should be stored in a cool well ventilated cellar. Then in the spring they should be selected again and those infected with fusarium wilt discarded. The remaining ones should be soaked for

one and one-half hours in a "4 oz. corrosive sublimate to 30 gal of water" solution, general, and planted 5 inches deep on clean land.

### STORING CABBAGE

#### IN THE FIELD

In choosing a site for a storage pit, select a ridge, well drained and as gravelly a soil as possible. The pit should be 6 to 10 inches deep, the length and width depending upon the amount to be stored. It is well to have it wide enough to accommodate 3 to 5 heads on the bottom row.

In harvesting the heads, pull up by the roots. Break off only the dead or diseased leaves, and fold the remaining leaves over the head as much as possible to protect them. Over-ripe or cracked heads should not be stored. The heads are placed in the pit with their heads down and roots up. The second layer is also placed heads down between the roots of the first layer. It is well not to have more than two layers, on account of the weight having a tendency to crush the lower layer.

When the cabbages are put in place they are covered with a layer of earth. When cold weather comes, straw or manure can be added.

Cabbages can often be kept better in pits than in common cellars.—E. F. McKune, Colorado.

### THE COST OF UNPAID BILLS.

We helped you—now help us. Unpaid bills are like weeds—they are both displeasing and needless. They hold back the natural process of business "waste and repair."

Congestion in the body is an unpaid bill—and the world of business is like one big person, each part depending on all the other parts.

An unpaid obligation is like a log-jam, where one contrary log can keep all the others from moving.

Unpaid bills call for reminders—and reminders of the nature are unpleasant. Why promote unnecessary unpleasantness, when the opposite condition is desired?

Nature pays her bills—start right in utilizing every waste thing, to provide means for the growth of other useful things.

If nature forgot her obligations for even a second, we would notice it—therefore, we cannot help noticing other unpaid obligations that run for long periods.

Asking for payment is not a dun—not an insult. It is a simple request made necessary by the active principles of business.

Bills unmet are punctures in business—keep business from bearing its full load and going at top speed.

Bills are deciding factors in the economics of business. Wastes through fire or other causes are no more harmful than wastes through unmet obligations.

Whatever inconvenience may be experienced in meeting an obligation is never any greater than the inconvenience of extending the accommodation.

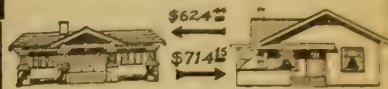
Business is a mutual process—and nothing can be mutual unless both sides do their part.

In granting credit, we are like a "helper locomotive" that assists a train over a hill.

Every helper must be accounted for in the expense items. It is not an incident, but a necessity.

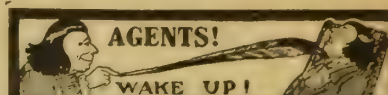
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# Sheep On Irrigated Lands

By R. H. Williams, Arizona Experimental Station

Up to the present, our farmers have not fully appreciated the advantage of maintaining sheep on irrigated farms. This land is extremely valuable and must be utilized to its limit of crop production so as to make it profitable. Sheep are especially recommended to be used on each and every irrigated farm. They make use of certain wastes and injurious weeds. They also clean out-of-the-way places, such as fence corners, irrigation ditches, lanes, etc., and are of great value in keeping the farm neat and attractive. It is interesting to know that the number of sheep in the United States is decreasing and that prices have greatly advanced. The decrease in the number of sheep has taken place chiefly on cheap lands while those places where land is highest in value are increasing their flocks. Sheep are attractive, clean animals and should be used to great advantage on many irrigated farms.

## Sheep as Weed Destroyers.

There are 100 varieties of weeds on an average irrigated farm that sheep will keep in control. They eat down and prevent weeds from going to seed. In the irrigated districts injurious weeds have proven especially troublesome. It has been proved that sheep confined to a Johnson grass pasture will kill this weed. Horses, cattle and hogs are of much less assistance in keeping weeds in check.

## Sheep on Irrigated Ditches.

Since the principle of irrigation draws water from distant parts and

distributes it over wide areas, it is important that the ditch banks be maintained clean, so that few weeds are disseminated. The average main canal or lateral of any irrigation system is a veritable hot bed for the production of weeds. Often they are allowed to go to seed and these seeds are scattered broadcast throughout the whole system.

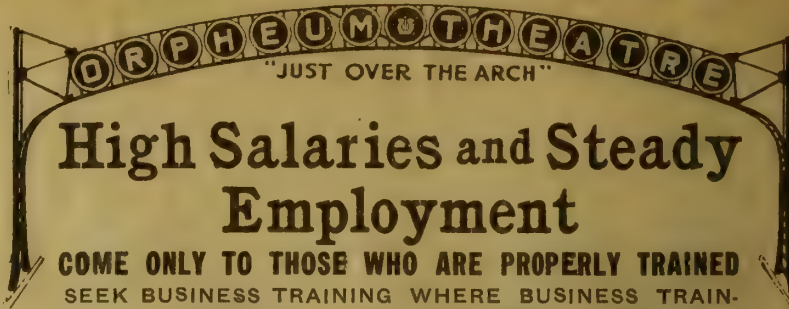
Sheep have been found most useful animals to place along irrigation ditches to keep the weeds in check. They are small and active so that a small space may be fenced along the ditches. They continually nibble off the green shoots and blossoms so that few are allowed to go to seed. If confined to a limited area, they are certain death to practically all kinds of weeds. Recently, I made a trip and found several nice flocks of sheep along the fenced ditch banks. One man told me the he had spent hundreds of dollars annually keeping his ditches clean. Last year he fenced all his ditches and bought a flock of ewes and is much pleased with their work. The sheep keep the banks clean, besides yielding a good clip of wool and over 100 per cent of lamb crop, for which the owner refused \$6 per head. He claims that the money obtained from the lambs and wool is all "velvet."

I have seen the ditch banks as bare of vegetation as Broadway after sheep have been fenced on them for two years. Before the sheep were fenced on the ditch, Johnson grass grow as high as a man's head. Progressive farmers are realizing the great assistance sheep can give them in controlling many weeds. At the present time, there is a very active demand for sheep for this purpose. They are a paying proposition. Taking one year with another, they pay as well as any other live stock. There have been times when the price of wool and mutton did not look attractive to the producer, but that time is past. Never before in the history of sheep husbandry has the outlook for good useful sheep been brighter than at the present. Of late years the industry has expanded rapidly, on many small farms, but the market is undersupplied.

Sheep lend themselves especially well to irrigated farms and practically every farmer should have at least a small flock. They require little labor, costing little for feed and may pay their way by their industrious methods of keeping weeds in control. Sheep come as near solving the hired help problem as any other kind of farming. No other farm animal receives as little attention and labor as sheep. Lambs milk the ewes at somewhat regular intervals separating the milk and storing away the products without the use of cans or ice. When a farmer sees a bulge on his side of the market, the kind-hearted, industrious lambs are asked to trot to market carrying all the milk and worry with them. No wonder the farmer returns wearing a glad smile for he feels it is "like finding money."

In Arizona alone there are over a quarter million acres of irrigated land. About one sheep for every two acres should be the number of animals that may be handled to the best advantage. This means that at least 100,000 sheep

# HOOVER BUSINESS COLLEGE



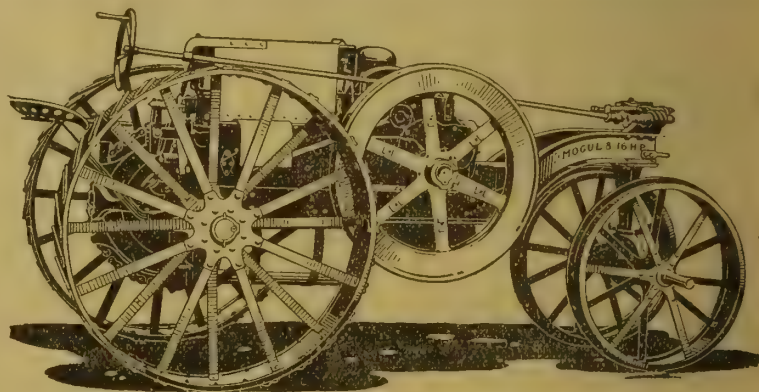
SEEK BUSINESS TRAINING WHERE BUSINESS TRAINING IS A SPECIALTY. This school possess a Model Office where all the details of office routine are not only taught but PRACTICED. Our graduates know how to describe tracts of land, draw deeds, mortgages, bills of sale etc. They are trained in the use of all the modern office appliances, viz; the Mimeograph, the Dictaphone, the Adding Machine, the Protectograph, Filing Cabinets, etc.

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There is only one reason for this unprecedented demand. Tractor farming pays. Horse boarders are cut down to the small number required for cultivating and the few other jobs for which tractors cannot be used. The plowing, disking seeding and harvesting are finished without relation to the effect of weather on horses. Costs are reduced all 'round. Net farm profits are higher. Tractor farming pays well on small farms when the work is done with a Mogul 8-16. The longer you put off buying one, the more money you lose.

The Mogul and Titan lines include larger tractors to 30-60 H. P., all operating on low grade oil fuel, and a full line of general purpose oil engines, from 1 to 50-H. P. in size. See the local dealer who handles these machines or write us for full information.

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## A Practical Test

Of any farm paper is the service it gives its readers. The Utah Farmer is giving you a real service. One of our readers was kind enough to write us the other day and say that he often found in a single issue an article that was worth the price of a year's subscription to him. You will find much the same value if you will carefully read each issue.



should be maintained on irrigated farms in order to make use of the weeds, save labor and keep the farm clean. Wool, fertilizer and weed-destroying value would easily cover the expense of maintaining them. The profits would come in the way of selling the lambs. If the lambs are worth \$5 each these sheep on irrigated land would return a net profit of fully \$50.00 a year. Besides this, it is probable that under the Roosevelt ditch alone, fully \$500,000 a year is expended to keep the banks clean. Sheep will do this work much more efficiently and for nothing, besides returning a handsome profit for the privilege.

#### Size of the Flock.

Although sheep are suitable for use on irrigated farms, yet their distinct advantage results from their weed-destroying qualities. On this account, the maximum profits from sheep raising are obtained where the number of sheep is in proportion to the weeds to be destroyed. The general rule is to have one sheep for every two or three acres and at least 15 in each flock. From 20 to 50 ewes are considered to be about the right size for the average farm. Where weeds are very plentiful more sheep should be maintained, but the general rule can be laid down for all farms as they differ greatly in size and general suitability for sheep. One should count on an increase of fully 100 per cent in the lamb crop, and these should sell at an average value of at least \$6. Where the flock consists of 25 ewes and a ram are maintained one should raise 30 lambs and sell about \$44 worth of wool. Five of the ewe lambs should be maintained in the flock and a like number of the best or inferior ewes discarded. At present prices at least \$224 should be obtained for wool, sheep and lambs throughout the year from this small flock.

In many places on irrigated farms it is possible to obtain two crops of lambs in one year. Where this practice is followed, it is necessary to span the lambs early and give the ewes some special attention. Where the fancy market for hot house lambs exists, one can succeed especially well by having the lambs dropped in the months of October and March. For this purpose a smaller flock should be maintained and the lambs should be grown rapidly to produce fat, tender meat.

#### HIS CALL.

A young surgeon received late one evening a note from three of his fellow practitioners:

"Please come over to the club and join us at a game of bridge."

"Emellie, dear," he said to his wife, "here I am called away again. It is an important case—there are three other doctors on the spot already."

## Markets

Principal interest is now centered in the wheat market throughout the country, as conditions now existing have never before appeared in this country. The normal wheat crop of the United States is 725,000,000 bushels; this year the crop reaches the enormous total of 950,000,000 bushels, leaving the country with a surplus of 400,000,000 bushels, which is an increase of 200,000,000 bushels over normal. Eastern market conditions have operated to keep the price down of late, but in the judgment of local wheat experts the price will advance shortly, or at the expiration of certain options held at eastern centers, principally Chicago.

Locally, wheat is in good demand, owing to damage to the crops of the southwestern states by recent storms and floods. Demand is being made upon the wheat of this state to replace the crops thus damaged or destroyed. The quotations given below are f. o. b. prices Salt Lake:

Wheat, soft, white—\$1.45 cwt.

Wheat, Turkey Red—\$1.40 cwt.

Oats—\$1.25 cwt.

Barley—95 cents cwt.

Rye—\$1.25 cwt.

#### Hay

Alfalfa—\$10 ton baled.

Eggs—\$7 case 30 doz.; retail \$8 and \$9.

Butter—Creamery 29 cents in cubes; 30 cents in prints.

Butter—Ranch 25 cents pound.

#### Chicago Grain Market.

Wheat goes higher because the foreigners are reported buying large quantities. Weather conditions are better for harvesting and threshing.

Wheat—No. 3 red, \$1.15½; No. 3 hard, \$1.09@1.14.

Corn, No. 2 yellow, 77@77¼c; No. 4 white, 74¾c.

Oats, No. 3 white, 34@36c; standard, 38½c.

Rye, No. 2 96@96¼c.

Barley, 50@60c.

#### Kansas City Live Stock

Hogs—Steady bulk, \$7@8.05; heavy, \$6.80@7.40; packers and butchers, \$7.25@8.05; light, \$7.60@8.10; pigs, \$7@7.75.

Cattle—Steady. Primefed steers, \$9.50@10; dressed-beef steers, \$8@9.40; western steers, \$6.40@8.75; stockers and feeders, \$6@8.50; bulls, \$5.25@6.25; calves, \$5.50@10.50.

Sheep—Higher. Lambs, \$8@8.60; yearlings, \$6.40@7; wethers, \$5.50@6.50; ewes, \$5.25@6.

Wiseman: "Here's a proverb I've proven strong and true: 'An apple a day will keep the doctor away.'"

Matchem: "Here's something I've proven stronger: 'An onion a day will keep everybody away.'"

By special arrangement with the publishers, Small Maynard and Co., Boston.

## Little Sir Galahad

An entrancing story by Phoebe Gray, will be run as a serial in **The Juvenile Instructor**, beginning with the October number.

The story is one approved by the General Board as one of the M. I. A. Reading Course, and is especially adapted for the youth of this common wealth.

Following is an opinion by Edward H. Anderson, Associated Editor of **The Improvement Era**, on the Story:

"Little Sir Galahad" is a new book just issued by Small, Maynard and Co. It is a story of a little crippled boy, a little abused girl, a drunken man who is later informed, a kind-hearted but unthinking millionaire and his son who falls victim to intemperance but "comes back" through the fine strength of his own will stimulated by the love of a noble girl. It is a sweet story, told in a way that holds the interest throughout. "Little Sir Galahad" demonstrates the triumph of faith throughout. The book is one of the few novels nowadays that inculcates a living faith in God. It is one of the few books that discountenances the use of tobacco and encourages temperance. The faith of the crippled boy, throughout, is most healthful, the whole text having a tendency towards the establishment of trust in God and belief in what our people term the Word of Wisdom. Phoebe Gray, the author, has succeeded in dressing her characters with a 'faithfulness to real life which is absolutely convincing, and which awakens the finest and deepest emotions of the human heart.' The book has likewise a 'wholesome entertainment, blended skillfully with a great moral lesson.'

The Juvenile Instructor containing this story, and many other excellent features, is \$1 per year.

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## THE HOME

### SERVE CANNED VEGETABLES ATTRACTIVELY.

Miss Oberlin, Colorado A. C.

That the housekeeper who, through canning demonstrations, has become interested in canning corn for use in the family dietary next winter, collect attractive recipes for serving canned corn. While there are persons who are satisfied with meat, potatoes, and a warmedup canned vegetable, most people feel poorly fed on such a monotonous diet and welcome variations.

"Corn Chowder" furnishes a nourishing, substantial dish for the evening meal and is easily made; while "Baked Corn," especially when served in individual baking dishes, is an attractive way of serving the second vegetable. "Corn Oysters" may be made by adding to the mixture prepared for "Baked Corn" two tablespoons of flour and dropping the batter by the tablespoonful into a frying pan containing hot fat and frying until brown.

#### Corn Chowder

- 1 qt. hot milk.
- 2 tbsp. butter or drippings.
- 4 c. potato cubes.
- 1 small onion finely chopped.
- 1 can corn.

Salt and pepper to taste.

Melt the butter, add the onion, and cook slowly until soft. Cook the potatoes in boiling, salted water until soft, drain, add the onions, the milk, salt and pepper, heat to boiling point. If desired 2 tbsp. of butter may be added. Pour over toasted crackers or squares of toasted bread.

#### Baked Corn

- 1 can corn.
- ½ c. milk.
- ½ tsp. salt.
- 2 tbsp. butter.
- ¼ tsp. pepper.
- 1 tbsp. sugar.
- 1 egg.

Put corn through food chopper, add the milk, the well beaten egg, the melted butter, salt, pepper, and sugar. Mix well, put into a buttered baking dish and bake in a moderate oven until firm and brown. (The value of this dish may be increased by the addition of two eggs.)

#### APPLE SIRUP.

A Method of Utilizing Windfall and Cull Apples—Directions for Making This Palatable Product.

Experiments by Government canning specialists show that a very palatable apple sirup can easily be made from apple cider. While it may not be practical for the average fruit farmer to produce apple sirup on a commercial scale, the home manufacture of apple sirup for the family's winter use will furnish a profitable outlet for a large number of culls and windfalls which can not be marketed.

Apple sirup made by the following method is a very palatable product. It has a flavor much like the thick sirup or jelly which is so often formed when apples are baked with a little sugar. As shown by experiments, this apple sirup can be used in cooking with good results, as well as for table purposes.

Reducing Apple Cider to Sirup.

Wash apples and remove all decay-

ed and worm-eaten spots. Press out juice as usual for cider making. Be sure the juice does not ferment or "work," as only sweet cider should be used for sirup making. The sterilizing reducing vat or kettle should be a third larger than required to hold contents.

Add 5 ounces of powdered calcium carbonate to 14 gallons of apple cider. Powdered calcium carbonate (carbonate of lime,) commonly called precipitated chalk, is a low-priced chemical available at any drug store. Boil in kettle or vat vigorously for a period of 5 minutes. Pour the liquid into vessels, preferably glass jars or pitchers; allow to stand 6 to 8 hours, or until perfectly clear. Pour the clear liquid into preserving kettle. Do not allow sediment at bottom to enter. Add to the clear liquid one level teaspoonful of lime carbonate and stir thoroughly. The process is completed by boiling down rapidly to a clear liquid. Use density gauge or candy thermometer and bring it up to 220 degrees F., or, without thermometer, reduce bulk to one-seventh of original volume. To see whether it is cooked sufficiently, test as you would sirup or candy, by pouring a little of it into cold water. If boiled enough, it should have the consistency of maple sirup. It should not be cooked until it hardens like candy when tested. When the test shows that the sirup has been cooked enough, pour it into fruit jars, pitchers, etc., and allow it to cool slowly. Slow cooling is important, as otherwise the suspended matter will not settle properly and the sirup will be cloudy.

A good way to insure slow cooling is to stand the vessels full of sirup in a bucket or a wash boiler of hot water. They may also be placed in a fireless cooker. The white sediment which settles out during cooling is called "malate of lime" and is a compound of lime with the natural acid of the apple. When the sirup is cooled, it should be stored in fruit jars or bottles. Place the rubber cap or cork in position and tighten. Then place the bottles or cans of sirup in hot water and sterilize for 12 minutes in hot-water or homemade outfit.

#### MILK IN BREAD MAKING

Housekeepers, who have difficulty in making good bread with the water from their wells, should use skimmed milk for the liquid. The food value of the bread is increased in this way, the flavored is good, the crust browns nicely, but some authorities report that bread made with milk dries out quicker than when water or potato water is used. Buttermilk is the liquid sometimes used but it may give an unpleasant flavor to the bread.

The flavor of water bread is good, but when this liquid is used fat should be added to the bread to make the crust less tough.

Potato water may be used but often results in dark colored bread. Clear, warm water to which mashed potatoes have been added gives just as good results and better color.

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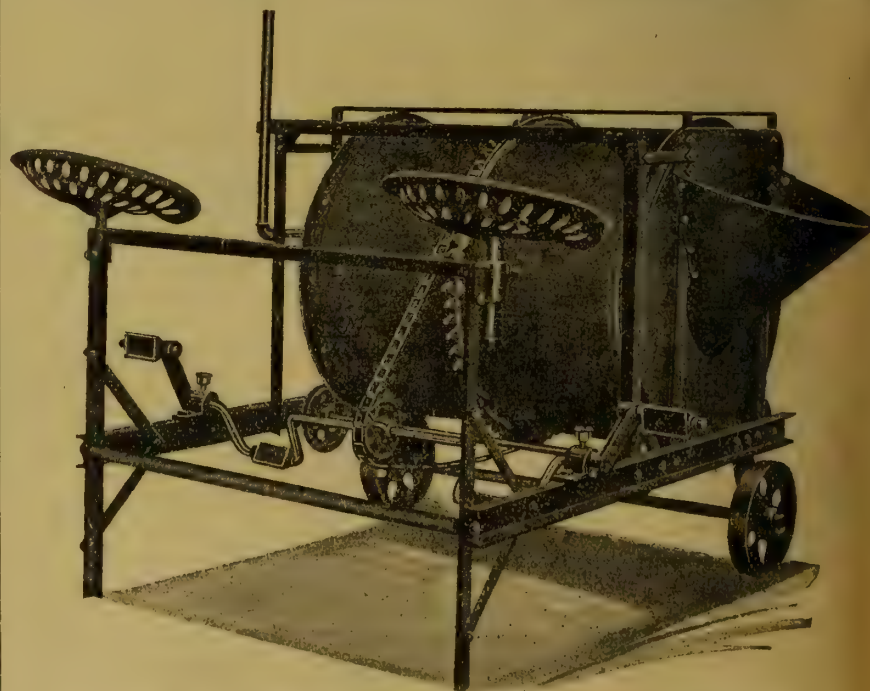


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GOING TO BUILD? Then you need this profusely illustrated, 32 page book. It contains many beautiful illustrations showing the use of brick in the construction of attractive, inexpensive homes. In fact it tells the story of

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**Salt Lake Pressed Brick Co.**  
KEARNS BLDG. SALT LAKE CITY, UTAH  
Dept. U

Enclose this ad. with your request

### ANSWER

The advertisements in this issue either by asking your local dealer for them, if he does not carry them in stock he may send for them, or you can write direct for catalogue and information. Don't forget to mention the Utah Farmer for we are back of every advertisement that appears in our paper.

fair-sized man, making his living over a desk, requires about 2,500 calories of energy per day. Now, ordinary clear soups and broths run 50, 60, and 70 calories to the pint. The ordinary man, therefore, in order to do a day's work would require something like five gallons of such soup. The meaty soups do better. They lie between one and two hundred calories to the pint. But, after all, beef stew is four-fifths water and one-fifth nutriment. Much despised crackers, which the ordinary old-fashioned housekeeper thought contained little nutriment, are, as a matter of fact, weight for weight, five times as nutritious as beef stew and thirty times as nutritious as clear soups. Crackers lie between 1,800 and 2,000 calories to the pound.

### THE SCALE ON THE FARM.

W. C. Palmer.

The scale is just as important on the farm as in the grocery store. How would the grocer succeed who in selling sugar should put in a few scoopsfuls and say, "I guess that's about right," or in selling nails should drop a few handfuls in the bag and say: "I guess that's about it." The farmer who guesses at how much he is feeding his cows or hogs, who guesses at how much milk or gains he is getting is doing just the same kind of business as the merchant who should guess instead of weigh.

The cows and the pigs, etc., are the farmer's customers. They take his feed and roughage. Now the farmer needs to know what he gets in return in the way of pounds of milk, butter fat, pork etc. No successful business was ever built on guessing—farming is no exception.

This brings to mind a case. A boy who was learning how to test milk at school tested his father's herd. He also weighed the milk from each cow morning and evening and kept a record of it. He also kept a record of the feed given the cows. After a while the fourteen-year-old informed father that Brindle didn't give enough butter fat to pay for her feed. He looked at him rather funny. The idea of his boy telling him that! Yet he did not attempt to contradict him. He knew the boy had been weighing and figuring. The boy also informed him that Spot was paying a splendid profit and Rosy was not paying for her feed, and so on. What was to be done? His information was taken and acted on. At the end of the year the herd had been reduced from twenty-one to fourteen cows by selling the poorest and buying some more good ones. The fourteen gave more profit than the twenty-one. That was what a fourteen-year-old boy could do by weighing and keeping accounts. The time the boy spent in doing that weighing and figuring, only a few minutes a day, brought more profit than the day after day of work put in by his father. And these few minutes of work a day made it possible for that father to increase his returns year after year.

If one is feeding pigs, the only way to know what is going on is to weigh the pigs from time to time. The horses should be weighed that their condition may be the more accurately known. The load of grain or hay that goes to town should be weighed. But there is no need of enumerating further. The scale is necessary on the farm—just as necessary as in the grocery store or the coal yard.

## Pattern Department

Full directions for making as the quantity of material required, accompany each Pattern. Price of each Pattern, 10c; no extra charge for postage. When ordering, all you have to do is to let us know your name and address, the number and size of each Pattern you want, enclose 10c for each pattern, and address all your orders to: PATTERN DEPARTMENT, THE UTAH FARMER LEHI, UTAH.



7353—Girls' Dress... Cut in sizes 2, 4, 6 and 8 years. Body and sleeve sections are in one and the bloomers are separate. Price of pattern 10 cents

7355—Ladies' Skirt. Cut in sizes 22 to 32 inches waist measure. The skirt is cut in five gores. Price of pattern 10 cents.

7368—Ladies' Shirt-Waist. Cut in sizes 34 to 46 inches bust measure. Long or short sleeves may be used. Price of pattern 10 cents.

7375—Ladies' Kimono. Cut in sizes 30, 32, 36, 40 and 44 inches bust measure. The kimono can be made in the long or short length. Price of pattern 10 cents.

7371—Children's Dress Cut in sizes 4 to 12 years. The dress closes at the left side of the front. Price of pattern 10 cents.

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Pattern No.....Size or Age.....

Pattern No.....Size or Age.....

Name.....

Town.....

I enclose c) R.F.D.....State.....  
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## Z. C. M. I. Play Garments

Are just what you need for the little tot to romp and play in. Cheap, serviceable—Ask for them.

### OUR BOYS' SCHOOL SHOES

Are made for service—they will give you splendid satisfaction.



**THE BEST** \$45.00 strictly all oak tanned western Double Team Harness on earth with breeching and collars for



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Hame tugs, 1½ inch, with three loops and patent buckle. Traces 2½ inches solid single ply, with cockeyes.

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## Your Farm Equipment

should include "Never-Rip" work clothes.

—They'll give lasting service and pay for themselves many times over, in lightened labor, clothing saved and in service given.

—For that big farm or for the little backyard garden this Spring, there's no assistant more able and useful than

### SCOWCROFT NEVER-RIP

—1200 farmers and workingmen ask for them by name every day—

—because they know that entire satisfaction is guaranteed when the label says "NEVER-RIP."



## Bud Knowledge Aids Treatment-- Fruit Crop Depends on Buds

(By E. J. Krause, Research Associate in Horticulture at O. A. C.)

If the fruit buds are regarded as the actual fruit manufacturing machinery of a tree, it is necessary to know something of where they are located, how and when they are formed, and how they should be treated, says E. J. Krause of the Oregon Agricultural College. For convenience, they may be classified according to their particular location on the tree, namely terminal buds (on shoots, axillary buds (on shoots), and those borne on spurs.

The terminal fruit-buds are those which are at the very tip or terminus of a shoot. In certain varieties of apples, such as Jonathan, Gravenstein, Newtown and others, and in some varieties of pears, notably the Bartlett, Winter Nelis, and Angouleme, much of the first crop of fruit-buds is borne terminally on shoots.

The axillary buds are also borne on one-year-old wood, but on the sides of the shoots instead of at the tips.

The third class of buds, those borne on spurs, which are really nothing more nor less than very short branches, are borne either singly, or in aggregations of two, or many. Generally they developed first from either one or two-year-old wood, though at times from that which is older. They develop either from single terminal buds, as is general in plums and prunes, or from one to several lateral buds, as in apple and pears. Depending upon variety and environmental conditions, these annual increase in length may vary from a fraction of an inch to several inches, with the result that the older spurs may be very compact, or loose and spreading. In some instances large spurs consist of as many as forty or fifty buds on more, or less angled branches. A fruit-spur may be a single short branch bearing one or a few fruit and leaf buds, or a large aggregation of such branches which arise from one another.

The proportions of the several classes of fruit-buds vary greatly according to the kind and variety of fruit. In the peach, particularly, all the fruit buds are axillary and borne on one-year wood. Some of the annual branches are so short that they might be regarded as spurs, perhaps, though the proportion of buds borne on such spurs, as compared to the total number on the tree, is small. In this particular class of fruits the fruit-buds, which usually contain one or sometimes two flowers, are borne singly on one side or the other of the leaf-buds, or in pairs with a leaf-bud between them. They are usually more numerous toward the tips of the branches, though when the trees have been properly kept open to admit light and air they are plentiful on the smaller laterals and scattered well along the branches, except at the bases of the larger ones.

In the plum and prune, fruit-buds are borne both in one-year shoots and have large quantities of axillary buds, much as has the peach, except that frequently there are more than two at each node. The number of axillary buds on one-year-old wood in the case of the common varieties of prunes should be regarded as small compared with those on spurs, though one-year-old spurs are often prolific bloomers. The sweet cherry has its fruit-buds

either on spurs or as axillary buds on one-year-old wood. If the one-year branches are of any considerable length, it is worthy to note that the fruit-buds on them are borne near the base, or at least the basal one-half. Apples and pears may be considered together, since the methods of fruiting are similar. The fruit-buds are borne on spurs, as axillary buds, or terminals on one-year wood. Varieties vary greatly in this regard. Some have a large proportion of their fruit-buds on one-year wood, especially while young, while others bear very few such buds, having practically all, except a very few terminals, borne on spurs which sometimes are present on one-year wood. Attention is called to the fact that, normally, the axillary fruit-buds are borne near the tips of the branches instead of the base, just the reverse of the condition prevailing in the sweet cherry.

In apples and pears it is frequently objectionable to have fruit at or near the tips of long one-year branches, because such branches are bent with the fruit and becomes misshapen, are swayed with the wind, and thus bruise not only the fruit they bear, but all in the immediate vicinity, and tend to bring to fruit to the very outside of the tree, so that even a light load is apt to cause breaking. Yet it is undesirable at times to remove all such fruit-buds, because they may constitute a large proportion of the entire crop. If it were possible it would be of much greater advantage to have bearing on short laterals so that they might be saved to produce fruit. Such a condition actually can be brought about, especially with young trees, through a method of early summer pruning, whereby some of the branches, instead of being allowed to grow normally, are headed back sufficiently early in the season to allow laterals to spring from them and develop terminal and even axillary fruit-buds.

## Little Sir Galahad

By Phoebe Gray

"THE BOOK WITH A BLESSING"

**L**ITTLE SIR GALAHAD is more than a fascinating story for children—it is a book for grown-ups as well, and therein is the secret of its broad appeal. It preaches a powerful sermon on intemperance—a sermon that will have a lasting good—that has had a far-reaching influence already. "Little Sir Galahad" is a book that ought to be in every home because of its splendid inspiration and good cheer.



Just then the door swung open and Lem, quite red in the face, replied: "Here I Be." He was pushing before him a big and commodious wheel-chair. "That's what I wanted to go to town for."

Charmingly Illustrated

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**Our Herd Bull**



**Below is one of our  
Prize Winning  
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It is from such animals as these that we are offering for sale a few choice bulls.

**Mona's Victoria**

**Junior Champion  
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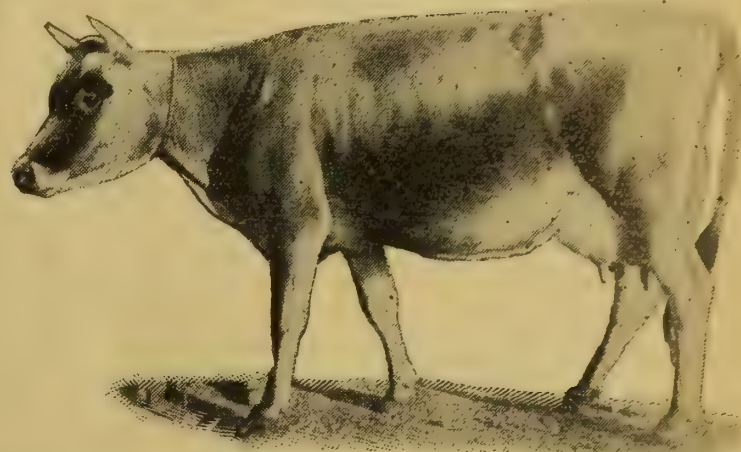
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Fair, Sept. 27 to Oct. 6th**

**Smith Bros. Jersey  
Farm**

**GEO. C. SMITH, Mgr.**

**R. F. D. No. 4 Box 51.**

**Murray, Utah.**



## Winter Dairying

In many sections most of the cows freshen in the spring. The more observing and careful dairymen, however, have found that winter dairying has many advantages, are breeding their cows to drop the calves in the fall. The following are some of the advantages of winter dairying:

First, higher prices are obtained for milk and cream. As the usual season for cows to freshen is the spring, milk has always been plentiful during the early summer and scarce and higher during the winter.

Second, milk and cream can be handled in cold weather with less danger of souring, so there is little loss on account of milk returned from the creamery.

Third, the amount of labor on the farm is better distributed throughout the year. If the cows freshen in the spring, they are in full flow of milk and need the best care when work in the fields is most pressing. On the other hand, if the cows calve in the fall and are milked during the winter, the farmer can give them close attention, has more time to study the problem of feeding, and can give his men employment all the year and in that way get better help.

Fourth, the lactation period is lengthened and the amount of milk given during the year increased. Cows that freshen in the spring milk heavily while grass is good, but as the pastures dry up the flow of milk falls off and with the approach of winter the

cows are nearly dry. If they freshen in the fall, they should at once be started on a good winter ration, and when they have been milked six months it is time to turn them to pasture and for a time the flow of milk will be nearly as great as that from fresh cows. Recent investigations by experiment stations verify this observation.

Fifth, fall calves can be raised better than those born in the spring. Young calves should be fed on milk for several months, after which they must be weaned and fed on solid food. If they are born in the spring, they will be tormented by flies all summer, they may be neglected because of the farm work, and when it is time to wean them they must be put on a dry winter ration. Fall calves come at a time when the dairyman can give them the closest attention, and when weaned they can be put on grass at an age when an easily digested nutritious food is most needed.

As more milk can be produced, higher prices obtained, the labor more evenly distributed throughout the year, and better calves raised, winter dairying offers the best returns to producers.

The Value of Play.—Learning how to play is an important part of one's education, too often neglected, especially by farmers. The lesson is better heeded now than it used to be in the days of our fathers, but we still need more of the health-giving

## Empress Theatre

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**FOR REEL ENTERTAINMENT  
SEE**

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**DURING YOUR VISIT TO SALT LAKE  
CONFERENCE WEEK**

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**MATINEES—Thursday and Saturday—15 and 25c.**

and soul-heartening that laughter and pure enjoyment brings into one's life. It is easy to work so hard that work becomes ineffective, because it has not been properly planned and directed. The man or woman who knows how to drop a task that is worrying the life out, and to find relaxation is something that brings enjoyment to one's self and to the family, has learned how to live well. Such a person goes back to the daily duties refreshed, with brain alert, quick to take ad-

vantage of every easier way of doing the task. And such living makes for sweetness of spirit and strength of character.

—If the money is borrowed for a wise purpose it will produce enough to pay back principal and interest and leave a fair margin of profit. If it is borrowed for a foolish purpose it will produce nothing and there will be nothing with which to repay the loan.



## POULTRY

### HOW TO KEEP CHICKEN HOUSE FREE FROM LICE.

Utah Farmer:

I have just built me a new concrete chicken house, and I want to put in thirty or forty pullets. The building is absolutely clean, and I want to keep it this way, and for this reason I want you to suggest some disinfecting solution that I can bathe each one of these pullets in to be sure that they will not bring any disease or lice into the building. Your prompt reply will be appreciated.

J. B.  
Answered by Byron Alder.

In order to keep your building free from mites and lice the first thing would be to spray the building thoroughly inside and out with white wash made in the ordinary way to which has been added about 4 or 5 ounces of CRUDE CARBOLIC ACID. This should be done about once a year and is one of the best methods of disinfecting that can be used. It will be practically impossible to keep mites and lice out as they will be carried in by birds and perhaps in other ways.

Do not dip fowls in any solution because it is very injurious to them. You can dust the fowls with lice powders or you can practically free the fowls from lice by putting some BLUE OINTMENT a piece about as large as a pea—on the fowls, rubbing well at the base of the feathers of the abdomen just below the vent.

The best way to keep lice and mites from getting a hold is to watch the fowls and to notice the cracks and crevices around the perches and nests, wherever any indications of these pests appear disinfect thoroughly. For controlling mites which live in the cracks and crevices around near the perches and on the perches, KEROSENE to which has been added 4 ounces of CRUDE CARBOLIC ACID to each gallon is very good. Stir thoroughly and apply with a brush or with a machine oil can to parts of the building where the mites appear.

### ROUP IN POULTRY

By Dr. R. H. Williams.

This disease is commonly called cold in the head, canker, chicken pox, watery eye, sore mouth, diphtheria, sniffles, and swollen head. Roup is a general term applied to several infectious diseases of a catarrhal or diphtheritic nature in poultry. It refers especially to a condition of discharge from the eyes and nostrils and usually begins from exposure and extreme changes in temperatures and drafts. Where dampness, cold winds, dust or filth exist in crowded pens with poor ventilation, the disease is especially troublesome. Poultry in Arizona are especially troubled with roup on account of the extreme hot days and cool nights. It is probable that every chicken yard in the state has this disease sometime during the year. Half grown chickens and turkeys are most susceptible to this disease and about thirty to fifty per cent of the birds in badly infected flocks die.

#### Symptoms.

A common cold is the first symptom of roup. Such birds present a weakened appearance, accompanied by sneezing, watery eyes and bubbles in

the corner of the eyes, swollen faces and sometimes a discharge from the nostrils. As the case advances, the birds become less active, lighter in weight and usually have a yellowish, cheese-like accumulation in the eyes, nostrils and throat. The best way to locate this cheese accumulation is to use a tooth pick and insert it between the slit in the upper part of the mouth where one will probably find a thick accumulation. Often the nostrils will become more or less closed with this deposit. Sometimes the feathers become smeared on one wing due to the birds rubbing their sore eyes against the feathers. The disease behaves in many different ways, but one may locate it in some particular part of the head. One also notices a sweetish sickening odor which is very characteristic. By looking for these symptoms one may easily diagnose the disease.

#### Prevention.

Since one does not often treat birds that have contracted the advanced stage of roup, prevention is of great importance. This is a disease caused by a germ and if one does not allow the germ to gain access to the poultry, no trouble is experienced. However, the germs are so easily carried by birds and attendants that it is probable germs are to be found in almost all large flocks. Sanitation is also of great importance as outbreaks follow exposure which produces cold and catarrh and finally develops into typical roup. By preventing the birds from taking a cold and maintaining them in a healthy, vigorous condition, infection may be reduced. Good feed should be given the birds and they should be given clean sanitary surroundings. Lice and mites annoy them greatly, thus impairing their vitality. Most strict sanitary precautions should be observed. The litter should be removed frequently and a thorough application of disinfectant applied. Fresh air, wholesome food and cleanliness, together with healthy birds, are the chief preventive measures. Another good preventive measure is to use wooden dishes or crocks for holding water, and add sufficient potassium permanganate to dye the water a deep wine color. Vaccination is also used with good results. This and many other diseases are often spread by birds that are showed or recently purchased. Extreme care should be exercised in introducing such birds to the flock. The best way is to isolate them for two weeks and make certain by careful inspection that they are not infected with contagious disease before allowing them to come into close contact with the main poultry plant. For this purpose an isolation hospital should be available and this should be situated at a considerable distance from the uninfected flock.

#### Treatment.

In a few exceptional cases as with valuable birds, it may be wise to attempt a cure. These diseased birds should be removed from the main flock and placed in a well constructed house located at a safe distance between the two flocks. If birds are noticed when they first contract a cold and are moved to more sanitary quarters where they may be given a

(Continued on page fifteen)



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or so at the Beaches  
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Then see the  
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Three Daily Fast  
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Correspondingly low rates to  
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Stop-overs; Diverse Routes.

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do. one way via .....	35.00
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Side trip rate Los Angeles to  
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\$5.00, and via steamer \$4.00, in  
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Tickets on sale daily to No-  
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LIMIT, three months from  
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Excursions to northern Utah  
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25.

Proportionately low rates from other Oregon Short Line  
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One 16-Horse Steam Tractor.  
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Have been used for short time, but  
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Write for price and details.  
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The Home of the Western Prize Herd  
My winnings at Idaho State Fair 1913,  
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took all but one second. I have any-  
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For Reference—all old customers.

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We carry a large stock of the Best  
Vegetable Parchment Butter Wrap-  
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Postage Prepaid at the following  
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100	\$ .90
200	\$1.25
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Send all orders to

**THE UTAH FARMER**  
LEHI, UTAH

## "SAFETY FIRST."

1240 acres in high stage of cultiva-  
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right, fully equipped with buildings,  
sheds, barns, farm implements, etc.; all  
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\$4500.  
450 acres, well stocked, highly im-  
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Will take some Salt Lake property.  
120 acres, fully equipped, with 93 inches  
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160 acres, good Idaho land, 5 miles  
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land fine summer range, for quick  
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160 acres South Jordan, a bargain at  
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29 acres good land with water right at  
Bountiful, forced sale, only \$3000, half  
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26,000 acres grazing land, fine for  
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**GEO. W. DANLEY**

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SALT LAKE CITY

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miles from town. Soil and  
location suitable for garden truck  
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is planted, and just coming into  
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**G. LORENTZEN**

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Wanted to hear from owner of good  
farm for sale. Send cash price and de-  
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Will begin its Fortieth Academic year,  
September 23, 1915.

Registration days, Thursday and Fri-  
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**CLASS WORK BEGIN MONDAY,  
SEPTEMBER 27.**

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FORMALLY THE GARRICK

On East 2nd South  
SALT LAKE CITY

Will open the season September 19th,  
with musical melodrama.

**VAUDEVILLE AND PICTURES**

ALL SEATS 10c. WHY PAY MORE?  
Make this theatre your family theatre

ALWAYS A GOOD SHOW

## FANCIERS OF DUROC JERSEY HOGS MEET US AT THE STATE FAIR

Salt Lake City, Sept. 27th, to Oct. 7th, 1915

We will there exhibit the wonderful boar, **RICHARDS DEFENDER**, as well as our other great herd boars, **VIRGINIA ILLUSTRATOR**, and **KEYSTONE VOLUNTEER**, and a number of choice sows and spring pigs.

If you need a Duroc Jersey boar, sows, or young stock of either sex, wait until you see our exhibit. It will pay you to do so.

## RICHARDS LIVE STOCK COMPANY

(Successor to Richards Bros.)

99 miles North of Ogden.

Virginia, Idaho.

## ROUP IN POULTRY.

(Continued from page fourteen)

little tonic such as mashes with ginger and a sprinkle of red pepper or some raw chopped onions, they will usually recover and not develop the acute form of roup. A change from a small lot to a large yard where they may obtain grass is also beneficial. A little nux vomica in the drinking water will aid digestion and should be given where succulents are limited.

The first thing to be done to cure roup in the advanced stage is to remove all false membranes in the throat, floor of the mouth and eyes, and treat these parts. Peroxide and water made up in equal parts, makes a splendid preparation to remove the accumulations. Following this, the throat may be treated with silver nitrate by swabbing and the eyes washed with a 2 per cent boracic acid solution. Creolin is a good preparation to cleanse the nostrils. A mixture of one grain of permanganate of potassium to 1 ounce of finely powdered milk sugar blown into the mouth, throat and nostrils is also effective. The head about the nostrils and eyes should be massaged to loosen the cheese accumulations and the head may be held in permanganate of potash for a few seconds. Vaccination by means of injecting a small quantity of vaccine prepared from culture of the organisms under the skin has been used with good results.

## FARM SHEEP COSTS.

Marketing of Lambs is Profitable—  
Largest Gains From Feeding  
Forage Crops and Grain

During the last few years a great many corn-belt farmers have established herds of breeding cows to produce steers for market. Increased market values have given promise of profit in this line. The lessened volume and added cost of western supplies are less serious than formerly as a handicap upon the development of a farm beef-raising industry.

The same changed economic conditions that are bringing the center of beef production farther east have equal force in relation to the production of mutton and lambs, although the return to production on farms has been less general in the case of sheep than with beef cattle. Continued good prices for sheep and difficulties in securing farm labor, however, have caused a marked revival of interest in the marketing of lambs from eastern farms. It is becoming more generally understood that the marketing of lambs at around

\$5 per head at the time they are ready to wean is a practical proposition. During nearly all of such a lamb's stay upon the farm its mother harvests all the feed needed for both, and during the rest of the year subsists largely upon feed which she gathers herself and which would otherwise not be utilized at all.

The Illinois Experiment Station has recently published the results of experiments conducted to show the most economical methods of raising lambs and maintaining breeding ewes. Sixty lambs dropped in March, 1915, when weighed July 16 averaged 67.6 pounds per head. On the basis of current market values on July 3, this lot of lambs was worth \$380.90. These 60 lambs were raised by 48 ewes. The average cost per ewe and her lambs for feed and pasture from March 27 to July 16 was \$2.52. The same ewes were fed for the entire period of pregnancy (146 days) preceding the birth of their 1914 lambs at an average cost of 76 cents per head. This gives the cost of a ewe and her lamb as \$3.28 for 255 days, during which time the lamb is made ready for market. The value of the ewe's fleece would more than offset the cost of her pasturage during the remaining 110 days from July 16 to November 3.

Another interesting and valuable suggestion from this experiment is found in the fact that 20 lambs raised with their mothers upon forage crops weighed 8 pounds per head more than those raised upon bluegrass pasture (grain was fed in each case) and were sold at a higher price per pound, bringing \$1.55 per head more than the blue grass lambs. The difference in cost of raising was slightly in favor of the forage lot, while the ewes from that lot had a market value, when the lambs were weaned, of \$2.50 per head more than those kept on blue grass.

Many now realize the fact that the growing of pasture grasses and forage crops that make healthy, vigorous hogs of good quality is the basic factor in successful pork production. They are raising hogs at a big profit. Of course those who are successful realize the fact that a certain amount of grain feed is needed to grow hogs with a greater profit, but they use this grain only as a supplement to the feeds harvested by the hogs in the pastures and fields.

Only a smart man can conceal the fact that he considers himself important.



# Cannon Brothers Jerseys



**F**AMOUS FOR SHOW RING QUALITIES, HAVING WON SIX OUT OF SEVEN SILVER CUPS OFFERED BY THE UTAH STATE FAIR ASSOCIATION, IN THIS CLASS, IN THE PAST FOUR YEARS, BESIDES NUMEROUS OTHER PRIZES IN UTAH AND AT THE PACIFIC INTERNATIONAL DAIRY SHOW. LOOK FOR OUR DISPLAY OF CATTLE, CUPS AND RIBBONS AS YOU ENTER THE LIVE STOCK COLISEUM AT THE COMING FAIR. BUT

## Better Than Silver Cups and Blue Ribbons

is the fact that our cows are producers. Do you get that? PRODUCERS. We believe we have more cows in the Register of merit than any other herd in Utah. Ask the Agricultural College about our official records, and compare them with records made by other herds in this state or in the east. A mature cow that will make 300 pounds butter in a year is mighty profitable. Our two year old heifers have averaged 400 pounds yearly.

## Another Thing

A few years ago milk was milk, and the pale blue varieties brought about as much as any other kind. It's different now. We are putting our product on the Salt Lake market with the guarantee that it will average better than 55 per cent butter fat, and as a result are getting a much higher price than is usually paid.

## Half The Herd from \$75 to \$150

We have a few selected bulls for sale, sired by our grand champions and from excellent cows. They will make money for any dairyman by increasing the quantity and improving the quality of his output. A bull is half the herd, and the wise men will see that at least half the herd is worthy of his efforts. Then it won't be long until he has a herd of which there is cause to be proud. Call on us at the Fair or address

**Angus J. Cannon**

PARK, CITY  
UTAH

OR

**Hugh J. Cannon**

505 TEMPLETON BLDG.  
SALT LAKE CITY, UTAH



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Ag R.R.

OCT 3 - 1915

# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region

OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE

VOLUME XII; No. 8

LEHI AND SALT LAKE CITY, UTAH

SEPTEMBER 25, 1915





## Some Objections to a Cow Testing Association

W. E. Meyers, U. S. Dairy Division.

A common objection met is, "It's too much work." Such an objection comes from a person who does not understand the working of an association because there is no extra work required of the farmer that is worth calling extra work. The tester weighs all feed and milk and keeps the record. All the extra time that is required of the farmer is that he spend a little time each month studying his record book. But I am sure that this is the time well spent. Most of the members of an association do spend a little extra time with the cows the day the tester is there, but this is not necessary, yet it is time for which the farmer gets good pay in the end.

Another objection that is brought up is, "It costs too much." Some say that if they pay out \$1.50 per cow for the test that it will use up all the profits the cows make. Of course a test association costs money. I don't believe that a person can get something for nothing. The minute some one wants to give me something worth while for nothing I get a little uneasy. A silo costs money, good cows cost money, and so does a test association, but a man that will pay \$60 to \$100 for grade cows and then feed, milk, and take care of them, and who won't give \$1.50 a year or 12½ cents a month to know just how good or just how poor they are, I don't think he has a very keen business mind. The test association is a business proposition, pure and simple. It is keeping books on the cows, and if you are milking cows and not keeping these records yourself it is up to you to hire it done. When a merchant hasn't time to keep books on account of too much other work, he hires it done. The bankers hire it done, and the farmers should follow their example and keep the books on the

cows themselves or hire it done. I do not believe the farmers can do this work for 12½ cents per cow a month.

Some bring forth an excuse that they don't know how long they are going to dairy and they may sell out. If the test association means more to one man than another it is to the man who sells his herd. In working in the Middle Western States and visiting a great number of farmers who are and have been members of testing associations, that is one of the big advantages they see in the work. Practically all agree that by testing a cow her value is materially increased. And reports of the selling of the association herds and the statement that the association has meant \$10 or \$15 per head increase. I have a bunch of clippings I could read to you on this point and would do so if I had more time.

An objection, or rather an excuse, that goes hand in hand with the above is, "that I am going to get a tester and test my own cows." The intention is fine and if carried out would be ideal and a paying investment. I would be the last one to try to discourage such a move, but as I travel around among the farmers and find that so many who have testers are not using them, and have for one reason or another, after using them three months or a year set them aside, I do not hesitate to make a prediction to men who refuse to join an association because they are going to buy outfits and do their own testing. I know there are many men who test continually and regularly, but I think that perhaps 75 per cent of the men who buy testers and start records fail to do the work regularly and keep the records year after year. I have a letter from Mr. Clark, of Rice Lake, Wisconsin, to Mr. Rabild, which bears on the points I have discussed. I shall omit a part of the letter that is in regard to his success in a Wisconsin cow competition, as it would be of little interest to you.

Rice Lake, Wis., March 6, 1912.  
Mr. Helmer Rabild,  
Washington, D. C.

Dear Sir:

Your letter of Marh 4 in regard to testing associations received, and will try to give you a general account of what it did for us.

The three years previous to entering the cow-testing association our average of fat per cow for a year was about as follows:

1906.....	200 lbs. fat.
1907.....	216 lbs. fat.
1908.....	200 lbs. fat.

The estimate of fat production was obtained by dividing the average income of each cow by the average price of butterfat for the year.

May 25, 1909, we started with a local testing association and that year, our average fat production per cow was 308.1 pounds, including a large per cent of heifers.

By the time we had entered the association I had found it did not pay to starve the cows, so began to feed better, and by the aid of the association I soon found that by feeding a balanced ration in general, but varied

These figures tell their story of the results of **SERVICE** combined with **STABILITY**.

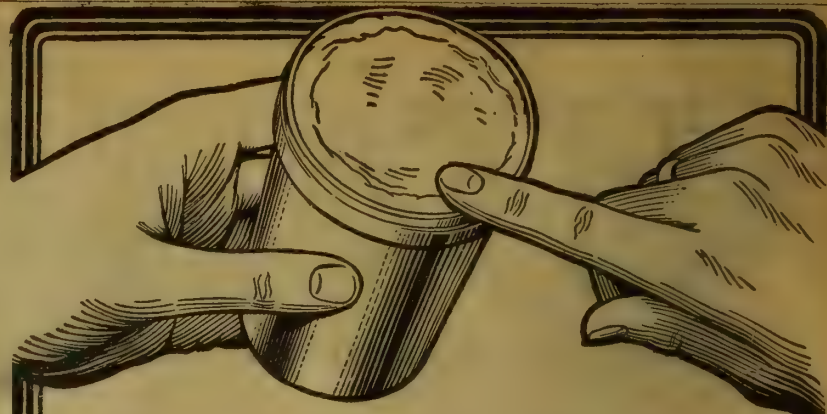
Deposits year by year of this bank as shown by reports to the state bank commissioners:

Oct. 9, 1911.....	3,047,929
Sept. 23, 1913.....	\$3,667,569
Aug. 28, 1913.....	\$4,328,583
Aug. 28, 1914.....	\$4,637,327
Sept. 2, 1915.....	\$5,290,702

**Walker Brothers Bankers**

SALT LAKE CITY

Founded 1895. "Courtesy Always."



### NO AIR CAN GET IN THIS GLASS

It is sealed with Parowax. Mold or fermentation cannot form on fruit that is sealed, *air-tight*.

## Parowax

Pure Refined Paraffine

seals really air-tight. When melted and poured over the cooled preserves it forms a thin covering of *air-tight* wax. Seal your preserves with Parowax—it's sure—it's easy—it's quick—it's inexpensive. Parowax is not a chemical, simply a sealing agent. Guaranteed under the Pure Food Law. Your grocer sells it.

### THE CONTINENTAL OIL COMPANY

(Incorporated in Colorado)

Denver Butte Pueblo Boise Albuquerque Cheyenne Salt Lake City

# UTAH STATE FAIR

## SALT LAKE CITY

**REDUCED  
RATES ON ALL  
RAILROADS**

**SEPT. 27-OCT. 6  
10 FULL DAYS**

**ADMISSION  
ADULTS 25¢  
CHILDREN 10¢**



**Big Money in Running Water**

Let us start you in a business that will make you from \$15 to \$50 a day when farm work is slack. Other men have done it for years with an

**Improved Powers Combined Well Boring and Drilling Machine**

Same rig bores through any soil at rate of 100 ft. in 10 hours, and drills through rock. One team hauls and operates machine. Engine power if wanted. Easy to operate—no experts needed.

Small investment; easy terms. Make machine pay for itself in a few weeks work.

There is a big demand for wells to water stock and for irrigation. Write for free illustrated circulars showing different styles.

**Lisle Manufacturing Co.**  
Box 979 Clarinda, Iowa



## EMERSON Farm Tractor

Model L—12-20 Horse Power

A four-cylinder, 2-speed light weight tractor of great power, suitable for any size farm. Will pull the implements you now have on your farm—gang plows, harrows, mowers, binders, manure spreaders, road drags or graders. Will also operate your ensilage cutter, feed grinder, circular saw, etc. Does more work than horses—costs less and is so simple anyone can run it.

Write Today for Free Folder

Illustrated in Colors

WE CARRY LARGER SIZES

**Miller-Cahoon Co.**

Murray, Utah Idaho Falls, Idaho

## Shoes Repaired by Parcel Post

BIG SAVING IN SHOE BILLS.

Shoes are repaired same day as received and returned by C. O. D. Parcel Post, and delivered to your door. It is just like having a modern, well equipped shoe shop on the place.

We own and operate SEVEN shops, employing more than 30 people. We are the largest shoe repairing company in the West and guarantee to please every customer.

Price list: Mens half soles 75c, ladies half soles 50c, heels straightened 25c, rubber heels 40c and 50c. Patch 10c and up.

It will save the 10c C. O. D. charge by sending repair charge and postage with order.

**Royal Shoe Repairing Co., Inc.**  
28 So. Main St., Salt Lake City, Utah.

2473 Washington Ave. Ogden, Utah  
7 Main St. Logan, Utah.  
8 Carr Fork, Bingham Canyon, Utah.

## The Grand Theatre

FORMERLY THE GARRICK  
On East 2nd South  
SALT LAKE CITY

Will open the season September 19th, with musical melodrama.  
VAUDEVILLE AND PICTURES  
ALL SEATS 10c. WHY PAY MORE?  
Make this theatre your family theatre  
ALWAYS A GOOD SHOW

to suit the needs of individual cows that our net profits from the herd were much larger and the cattle were in fine physical condition for another year's work.

Mr. Rabild, the benefits of the test do not stop here, but I think have just begun. Before the test I sold a neighbor several head of cattle, and priced him a certain cow for \$150, and after she had shown what she was capable of doing, I sold the same cow to the same man for \$275. I am selling other stuff in about the same proportion.

I attribute nearly all of this to the testing association. Of course we had bred well and had used a Babcock tester, but we were never able to get a complete test of our cows for a whole year, and when we joined the association this work was done for us much cheaper than we could do it ourselves, and when our tester left each month, our books showed us if we were feeding at a profit or not, and gave us courage to buy feed adapted to the needs of the cow, and to care for her in a way that was more profitable.

We are still testing and find some of our cows are doing better each year. Farmers should get their dairy business on a basis and a testing association is the way to do it.

Yours very truly,

(Signed) W. H. CLARK.

Some of the objections offered are rather ludicrous. A farmer when approached on the subject said he knew that some of his cows would not pay for their keep, but if he tested and knew just which ones they were he would not sell them because he wanted to keep 17 cows as his barn held just 17.

In working in a community in one of our eastern States, I had explained the work to a farmer and was in the cow yard looking at his cows. "Well," he said, "Some of my cows won't pay for their keep." And in looking over his cows I had seen a number of light-bodied ones of little or no dairy type, with microscopic udders, and I agreed with him.

### QUALITY IN BUTTER.

Much Responsibility Rests on the Producer—Many Factors Influence the Quality of Cream

Conservative estimates class only about 10 per cent of the butter produced today as fancy table butter, while the other 90 per cent ranges from medium to very poor in quality. A gradual tendency toward this condition has been noticed since the advent of the hand separator, but it is only in the more recent years that its serious aspect has become evident. Before the hand separator came into use it was customary to take the whole milk to the creamery daily in a fresh condition. But since creamery patrons have been enabled to separate their cream at home they are inclined to hold it too long, so that it often reaches the creamery in a fermented and decomposed state. Close students of dairying are considerably alarmed over present-day conditions and feel that all those interested in dairying, whether as producers, manufacturers, or merchants, should co-operate fully and unselfishly to remedy conditions that are causing poor quality.

The butter makers of today, as a whole are much more capable of manufacturing first-class butter than were those of 10 or 15 years ago. Modern methods and machinery and

the results of years of experience and investigation have made it possible to manufacture good butter, provided a good quality of cream is available. It is, however, impossible for the best of butter makers to make a sweet, wholesome product from poor cream. Old, unclean cream not only ferments but often decomposes. And yet creamery butter makers are criticized because they have not been able to make old unclean cream into butter that will pass as extra quality in the market.

Much of the responsibility for the poor quality of butter today rests on the producer of cream. He alone is responsible for the quality of cream that is furnished the butter maker. Strong competition among the creameries, rendering the creameryman fearful of criticizing his patrons' product, has been the cause of much of the poor cream of today, but the creamery patron is confronted with the fact that in the future he will be the loser if he continues to dispose of poor cream through the creamery. The butter markets—the basis of the creamery industry—are becoming unsettled because of the influx of so much poor butter, and the farmer need not be surprised if he is forced to receive a lower price, particularly for his low-grade butter fat than he has during more recent years.

All the conditions governing the quality of cream are under the control of the producer. Very little effort is required to improve ordinary conditions, so that a cream of the best quality may be produced at all times. It will soon become evident to the dairyman that, from a financial point of view, the little effort he exerts in producing a good cream is very profitable. Below will be found some directions that will aid materially in assisting the patron to improve the quality of cream he is delivering to the creamery.

Factors Influencing the Quality of Cream.

(1) A clean, well-flavored milk is a prime requisite of a good cream. To produce this kind of cream the following conditions are necessary:

- (a) Clean, well-ventilated barn.
- (b) Clean, healthy cows.
- (c) Clean, well-drained barnyard.
- (d) Clean, healthy milkers.
- (e) Clean utensils, free from rust.

(2) The cream separator should be thoroughly washed and sterilized after each time it is used. Particles of milk or cream left in the separator act as a "starter" to hasten the souring of the cream.

(3) The richness of the cream is a very important factor; for the best results cream should contain from 30 to 33 per cent of butter fat. Thin cream sours much more quickly than thick cream; hence thick cream can be kept sweet with less difficulty than thin cream. There is also less bulk to deliver to the creamery, more skimmed milk for feeding purposes, and the cream is in better form for the butter maker to handle.

(4) The temperature of the cream for holding should be 50 degrees F., or lower if possible. Cream sours very readily at temperatures above 60 degrees F., hence it should be held at a temperature below that. When practicable, creamery patrons should have an ice supply to assist them in this respect.

(5) The mixing of warm, fresh cream with cold cream is never advisable, as the whole mass is warmed thereby, and souring will follow more

(Continued on page seven)



## "Yankee" Makes Easy Work For Horses

—By The Oil Philosopher.

A film of Yankee Axle Grease, with its graphite base, on your axles, and there is no chance for friction to increase your load.

Harvesting time brings big loads. Everything should be done to aid the horses with their heavy duties.

Keep the roads in good repair and use—

## Yankee Axle Grease

This will obtain the desired result. Yankee Axle Grease keeps the wheels moving freely and the good roads prevent the constant side strain on the horses.

If you are using Yankee Axle Grease, be humane enough to tell your neighbors, so that they may relieve their horses of unnecessary work during the harvest season.

Yankee Axle Grease is for sale by all dealers. If your favorite dealer is ever out of stock, don't consider a "just as good," but write the Utah Oil Refining Company, Salt Lake City, and it will see that you are supplied.

**Utah Oil Refining Co.**  
Salt Lake City

**Fall Rye**  
and  
**Turkey Red Seed Wheat**

LOWEST PRICES

**Vogeler Seed Company**  
SALT LAKE CITY, UTAH.



## Lesson In Sewing

### THE PRINCESS SLIP.

#### Lesson XII

Supplies—Thimble; Needle, No. 7 Sharps; White and Colored Basting Cotton; No. 66 Sewing Cotton; Pins; Emery; Tape-Measure; Scissors; Material; Pattern; Note-book.

The pattern should be bought according to the age of the child, unless she is large or small for her years.

Ask your dealer for

## Western Service Shoe

Manufactured in Z. C.  
M. I.'s Shoe Factory  
Salt Lake City.

Our School Shoes for  
boys wear splendidly.



## UTAH A Community THEATRE

These are the plays to see while in  
Salt Lake.

### "UNDER COVER"

Week commencing September 27.

### "REBECCA OF SUNNYBROOK FARM"

Week commencing October 4.

Both Broadway Successes

Presented By

THE UTAH PLAYERS

A New York Company Under the  
Direction of

MAUD MAY BABCOCK.

Evenings 10c., 25c., 50c., boxes, 75c.

Matinee Thursday, 4:00 p. m. Satur-  
day, 2:15 p. m. 5c, 15c, 25c

ALL SEATS RESERVED

## The Grand Theatre

FORMERLY THE GARRICK

121 East Second South Street  
SALT LAKE CITY.

Next week, beginning Sunday, Sept.  
26, The May Vernon Company in

## "The Girl of The Golden West"

In Connection with Vaudeville and  
Pictures.

ALL SEATS TEN CENTS

"Why Pay More?"

In that case it should be bought by  
the bust measure.

After the size of the pattern is de-  
cided on, you can get your material,  
first looking at the quantities given  
on the pattern envelope to see how  
much you will need. You can use  
muslin, longcloth or nainsook. The  
envelope will also tell you how much  
edging you will need for your neck  
and armholes.

Read the pattern directions care-  
fully and look at the illustration of  
the pattern pieces on the back of the  
envelope. Be sure you know what  
all the perforations are for, and just  
which notches should come together  
at the seam edges. Open the pat-  
tern and put the flounce (piece 5)  
back in the envelope. If you are go-  
ing to make it as a lingerie under-  
garment you will not need the sleeve  
pattern (piece 4) and you can put  
that away too. If you are going to  
use it as a princess slip, you will need  
the sleeve pattern.

Before cutting your material you  
must be sure that the pattern is the  
right length for you. Find the front  
(piece 1), the underarm gore (piece  
2), the back (piece 3), and the sleeve  
(piece 4).

**Lengthening the Waist**—Measure  
the length of the underarm seam from  
three-eighths of an inch below the arm-  
hole edge to the small double per-  
forations that mark the waistline.  
Write the measurement down in your  
notebook. Get your teacher or one  
of your classmates to measure the  
length of your side at the underarm  
from your armhole to your normal  
waistline.

Compare your measurement with  
the measurement of the pattern and  
if the pattern is too long or too short  
for you it must be altered just above  
the small double perforations that  
mark the waistline. (Ills. Nos. 25 and  
26.)

If it is too long for you, lay a plait  
across each piece of the pattern. (Ill.  
No. 1.) The depth of the plait will  
depend on the amount you want to  
shorten the pattern. For instance, if  
you want to shorten the waist an inch,  
make the plait half an inch deep, for  
it is double.

If the pattern is too short for you,  
slash each piece and separate it the  
necessary amount. (Ill. No. 26.)

**The Skirt**—Now measure the length  
of the skirt of the pattern, using the  
front gore for this measurement.  
Measure it along the front edge of  
piece 1 from the small double per-  
forations at the waistline to within  
two and three-eighths inches (the hem)  
of the lower edge. Write down the  
measurement in your note-book.  
Measure one of your own petticoats  
or slips that is the right length for  
you. Measure it at the center front  
from the waistline to the lower edge  
and make a note of the measurement.

Compare the measurements of the  
pattern and your own petticoat or  
slip, and if the pattern is too long or  
too short for you alter it at the lower  
edge. (Ills. Nos. 25 and 26.)

If the pattern is too long, turn up  
the lower edge so that it corresponds  
with your own measure. (Ill. No. 25.)  
If it is too short for you, allow for the  
extra length in cutting, measuring the  
necessary amount below the lower  
edge of the pattern and marking the  
correct cutting-lines with pins. (Ill.  
No. 26.) Be sure to follow the lower

By special arrangement with the publishers, Small  
Maynard and Co., Boston.

## Little Sir Galahad

An entrancing story by Phoebe Gray, will be run as  
a serial in **The Juvenile Instructor**, beginning with  
the October number.

The story is one approved by the General Board  
as one of the M. I. A. Reading Course, and is especial-  
ly adapted for the youth of this common wealth.

Following is an opinion by Edward H. Ander-  
son, Associated Editor of **The Improvement Era**, on  
the Story:

"Little Sir Galahad" is a new book just issued by Small, Maynard and  
Co. It is a story of a little crippled boy, a little abused girl, a drunken man  
who is later informed, a kind-hearted but unthinking millionaire and his  
son who falls victim to intemperance but "comes back" through the fine  
strength of his own will stimulated by the love of a noble girl. It is a sweet  
story, told in a way that holds the interest throughout. "Little Sir  
Galahad" demonstrates the triumph of faith throughout. The book is one  
of the few novels nowadays that inculcates a living faith in God. It is one  
of the few books that discountenances the use of tobacco and encourages  
temperance. The faith of the crippled boy, throughout, is most healthful,  
the whole text having a tendency towards the establishment of trust in God  
and belief in what our people term the Word of Wisdom. Phoebe Gray, the  
author, has succeeded in dressing her characters with a "faithfulness to  
real life which is absolutely convincing, and which awakens the finest and  
deepest emotions of the human heart." The book has likewise a "whole-  
some entertainment, blended skillfully with a great moral lesson."

The Juvenile Instructor containing this story and  
many other excellent features, is \$1 per year.

Address

## JUVENILE INSTRUCTOR

Salt Lake City, Utah

## Empress Theatre

MAIN STREET  
SALT LAKE CITY

## STATE FAIR WEEK

PAY US A VISIT

YOU WILL ENJOY THE ERNEST WILKES  
STOCK COMPANY IN

## "A Butterfly On The Wheel"

THE STRONGEST DRAMA ON THE DIVORCE  
QUESTION EVER WRITTEN

NIGHTS 15-25-35- AND 50c.

MATINEES—Thursday and Saturday—15 and 25c.

## A Practical Test

Of any farm paper is the service it gives its readers. The  
Utah Farmer is giving you a real service. One of our readers  
was kind enough to write us the other day and say that he  
often found in a single issue an article that was worth the price  
of a year's subscription to him. You will find much the same  
value if you will carefully read each issue.



edge of the pattern very closely so that the new line will be true and even.

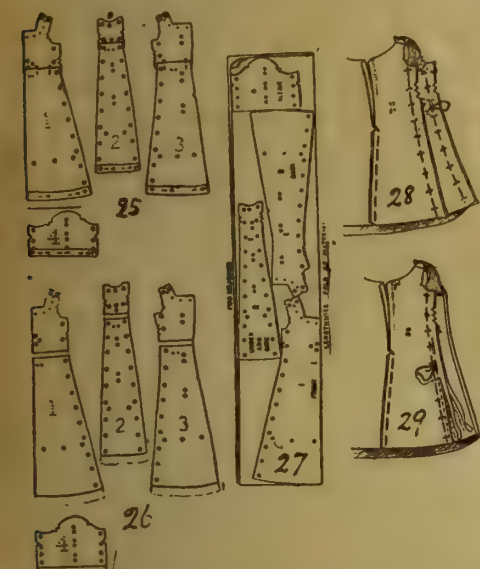
**The Sleeve**—Measure your arm along the inside from the armhole to the elbow, and compare it with the measurement of the sleeve seam of piece 4. Remember that three-eighths of an inch will come off both the armhole edge and the lower edge of the sleeve for seam finishes.

If the sleeve pattern is too long or too short for you, alter it at the lower edge. (Ills. Nos. 25 and 26.) If it is too long, turn up the lower edge. (Ill.

and run to the bottom of the garment. The seam is left open above the single notches for a placket.

Join the shoulder seams of the front and back with their notches matching, basting through the outlet perforations and making the seam on the right side of the garment. (Ill. No. 28)

**Trying On**—When the seams are basted try the garment on, pinning the backs together three-eighths of an inch from the edges. It should fit easily and smoothly over the chest and shoulders and hips, and should curve in a little at the waistline. It



No. 25—Showing how to shorten the pattern.

No. 26—Showing how to lengthen the pattern.

No. 27—How to lay pattern on material for cutting.

No. 28—Basting the seams on the right side of the garment.

No. 25.) If it is too short, add to the lower edge in cutting. (Ill. No. 26.)

**The Neck**—This slip is to be made with a round neck so the pattern must be cut away three-eighths of an inch above the small single perforations near the neck of pieces 1 and 3, the front and back, when trying on.

**Cutting**—Spread your material out smoothly on the cutting-table and arrange your pattern on it as shown in Illustration No. 27. The large triple perforations should come on a lengthwise fold, and the large double perforations should be placed lengthways. Illustration No. 27 shows the pattern laid on material thirty-six inches wide. Pin the pattern to the material and cut out the undergarment, following the edges very exactly. Clip all the notches so that you can see them distinctly, but don't make them too deep.

**The Tailor's Tacks**—Mark all the perforations that you will need in making the undergarment with tailor's tacks. Use colored cotton so that you can see them distinctly.

**Basting the Seams**—Take the front of your undergarment (piece 1) and one of the underarm gores (piece 2) and put them together with their wrong sides together, their edges even and the notches matching. (Ill. No. 28.) Pin them carefully and baste together through the outlet perforations (Ill. No. 28). Join the other underarm gore to the other side of the front in the same way.

Join the back gores to the underarm gores with their notches matching and their edges even, basting through the outlet perforations and making these seams on the right side of the garment just as you did the others.

Join the back edges of the two backs with their notches matching, basting them three-eighths of an inch from the edge. This seam, too, should be basted on the right side of the garment. The basting should begin at the single notches in the back edges

should not fit the figure closely at any point, nor should it be too large over the chest and hips. If it draws or pinches anywhere, let out the outlet seams at that place. If it is too large, take in the seams as much as is necessary. Remember, though, that the second sewing on the French seams will tighten the undergarment a little.

If any alterations are necessary pin them in, take the garment off and baste them in. Try it on again, to be sure that it is all right.

**French Seams**—Sew the seams one-quarter of an inch beyond the basting with running stitches. (Ill. No. 27). Trim the seam edges down to within an eighth of an inch of the sewing. Take out the bastings and turn the garment wrong side out.

Fold each seam so that the sewing comes exactly on the crease and sew it a quarter of an inch from the fold, enclosing the raw edges.

#### CLEAN SURFACE FOR GLUING

In regluing woodwork, all former applications of glue should be removed as far as possible with sandpaper, a knife, or by dipping in hot water. The holding qualities of glue depend on the penetration into the grain of the wood. If the wood grain is filled with old glue or any other foreign substance the new application will prove of value in proportion to the porosity of the grain. The little threads of glue forced into the wood act as thousands of little dowel pins.

Two Jews were making their first trip across the ocean. On the first night, at bedtime, Max entered the stateroom and found Ikey clad in a lacy, beribboned night gown, and frilled boudoir cap. "For vy are you dressed like a woman, Ikey?" Max exclaimed.

"Oh, in case of an accident," was the reply. "Remember, women and children first."—Keystone Traveler.



## Well Drills that drill well! **ARMSTRONG** ABSOLUTELY GUARANTEED

**SIMPLE!  
DURABLE!  
EFFICIENT!  
ECONOMICAL!**

Will Cut the Cut of  
Drilling.

Call in or write for  
literature.

## LANDES & CO.

Corner 2nd West and North Temple. Salt Lake



# BANQUET BETTER BUTTER

## Cream Wanted

Highest Market Prices.  
We will guarantee to handle  
your entire output of butter fat.

**GUARANTEED TEST.  
PROMPT PAYMENT.**

Communicate with our agent  
in your locality or

**NELSON & RICKS CO.**  
SALT LAKE







With which is combined "The Deseret Farmer" and Rocky Mountain Farming." Established 1904

Entered as second-class matter in the Postoffice at Lehi, Utah.

Issued every Saturday by the  
DESERET FARMER PUBLISHING CO.  
LEHI, UTAH.  
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OFFICES:  
613 McIntyre Building, Salt Lake City  
James M. Kirkham, Manager  
Kirkham Building, Lehi, Utah

**ADVERTISEMENTS.**  
We believe that every advertisement in this paper is backed by a responsible person. We guarantee the reliability of advertisers, but we will not undertake to adjust trifling differences between subscribers and advertisers. This guarantee holds only when written complaint is made to the publisher within one week from the date of any unsatisfactory transaction, accompanied by proofs of swindle and loss and within one month of the date of the appearance of the alleged deceptive advertisement in the Utah Farmer, and the subscriber must prove that in writing to the advertiser he said: "I saw your advertisement in the Utah Farmer."

**OFFICIAL ORGAN**  
Utah Horticultural Society, Utah State Dairymen's Association, Utah State Bee Keepers' Association, Bear River Valley Farmers' Protective and Commercial Association, Agricultural College Extension Department and Utah State Fair Association, Utah-Idaho Millers' and Grain Dealers' Association.

When you ask for a change of address always give OLD and new postoffice address.

If we could only learn the value of selecting our seed. Better crops will bring better returns and will more than pay for the time and cost of selecting good seeds.

Now is the time to begin to gather up the tools and machinery around the place and put them under cover for the winter. Don't throw away good hard earned money by leaving valuable machinery exposed to the weather.

The plows, harrows, and drills are about the only implements that will be in use this fall from now on and the mowers, rakes, shovel plows, cultivators, binders, headers, etc., should be looked after. The European farmer is far ahead of us in this respect. When he gets a machine it lasts him a lifetime.

#### OUR STATE FAIR.

Every one interested in farm life should visit the fair. There are educational features of value to every one. The Fair stands for better live stock, better crops, better homes and more improved machinery. If you have not prepared and sent to the Fair some products from your farm for exhibition you have missed a good opportunity to boost your farm.

Attend the Fair and come home refreshed and enthused in your work. Take the wife and children along with you.

#### COURTESY ON COUNTRY ROADS.

There is a need for courtesy on the country road. This applied both to teamsters and to automobile drivers. Both should cultivate the spirit of give and take—of going at least half way.

It is sometimes very annoying to have to bring a car to a full stop or to have to go into low gear and run along the side of a steep turnpike to get past a wagon that could just as well have moved over to the other side and left plenty of room. On the other hand teamsters are often put to a good deal of inconvenience by being compelled to pull heavy loads out of the way to let machines pass—and many times this is not appreciated.

There is one positive danger which auto drivers could minimize by taking the trouble to dim their lights when meeting teams or other machines on narrow roads at night. Dazzling headlights have blinded many a driver before now and have caused team or machine to run over an embankment or into a ditch.

Let us promote both safety and general good feeling by cultivating courtesy on the country road.

#### COUNTY AGENTS.

It is only a little over four years ago that the county agents or demonstrators were first appointed. As it is with nearly every new undertaking there have been some kickers, but as a rule the county agents have been given very good support in Utah. Some can remember the opposition that was given the Experiment Stations and Agriculture Colleges when they first started—but how different today. Confidence has been established in the minds of the people by the Stations and Colleges. We look upon them today as our leaders. They have done wonders for the agriculture of the country.

The farm adviser movement will have objections, but the opposition because of much wider experience along these lines will be a very great deal less than that met by the older agricultural institutions. Of course, an occasional adviser may not prove entirely satisfactory because they are human. In Utah we have been very successful in the relation of our men. The work of the county agent is growing and will prove to be a great success.

#### QUALITY HELPS MARKETING.

Whether you are selling products of the farm, garden, orchard, dairy or poultry yard the one big thing to have in mind is that quality counts first. The attractiveness of a product or package has much to do with the selling. The one thing to be considered however is "Quality First." Do not

over look this question in the marketing of your products, it spells the difference between success and failure. To reach the consumer in first class shape often means another order. Things should be put up in such shape, so attractive, so wholesome, that the buyer will want more of the same kind. Put your name on your products don't be ashamed of any thing you send out. There is a chance for nearly every one to improve in the packing and marketing of their products.

#### DRY FARMING CONGRESS.

Beginning September 26th and ending October 10th, the annual sessions of the International Dry-Farming Congress will be held at Denver, Colorado. In connection with the congress will be held an international soil products exposition, which will include exhibits of soil products grown at or under 30 inches annual rainfall, and those grown where the rainfall exceeds 30 inches, or irrigated crops.

All nations of the earth have been invited to take part in the deliberations of the congress and the exhibition of soil products. That the United States government recognizes the importance of the dry-farming movement and the congress which represents it is shown by the fact that Congress has appropriated \$20,000 for an educational exhibit in connection with the sessions of the dry-farming congress.

With the rise and progress of the International Dry-Farming Congress, as with the International Irrigation Congress, which concluded its sessions in Sacramento last Saturday, Utah is entitled to a considerable degree of credit, as both the irrigation and dry-farming movements had their western inception in this state. When the Pioneers reached the Salt Lake valley in 1847 the first thing they did after plowing up the soil was to turn the water on it, thus turning the key to the reclamation of thousands of acres of the heretofore arid soil. Later, where it was impossible to get water, some of the more hardy and daring of the Utah agriculturalists experimented in trying to get a crop without water. They succeeded and the Utah dry farmer became famous the world over.

It was in Salt Lake City that the first Dry-Farming Congress was held. Fisher Harris, of radiant memory, is credited with being the author of the movement to organize the congress and was its first secretary. Many Utah men have been active in its deliberations, Dr. John A. Widtsoe has been president of the Congress, and the late L. A. Merrill and others were prominent in its deliberations. Among its officers at the present time is a Utahn, namely J. W. Paxman, of Nephi, who is vice-president of the

Congress. Dr. F. S. Harris for a number of years has taken a prominent part.

The sessions at Denver promise to be of positive interest to the dry farmer. The Queen City has thrown open her hospitable gates and all who attend will doubtless feel repaid for going.

#### MEMORIAL BUILDING FAVORED

The suggestion that the monument to irrigation proposed in a resolution introduced before the sessions of the International Irrigation Congress, held in California last week, take the form of a building, is meeting with favor among those interested in the project. According to the dispatches, the matter was not finally settled at the adjournment of the congress, but was referred to a committee to investigate the most likely place for the location of the memorial, and to ascertain what moral and financial support might be offered the project by the states interested.

The idea that the memorial take the form of a building, in which the growth of irrigation from small beginnings to a science responsible for the development of an empire, could be shown, appeals most strongly to the people of the West, and especially of Utah, where irrigation in the West had its birth. And that Salt Lake City should be selected for the seat of the Temple to Irrigation, for it was there that the Pioneers first turned the water onto the thirsty soil, seems to be the appropriate thing.

Supplementing the action of the Irrigation Congress comes support for the enterprise from George Sutherland, United States Senator from Utah. Senter Sutherland says he will introduce a bill in Congress authorizing the appropriation of an amount sufficient to insure the erection of a suitable memorial in Salt Lake City. He advocates the idea that the memorial take the form of a building, which he says will be more readily favored by Congress.

Mr. King, chief counsel in the reclamation division of the government, is a native of Oregon, and has always been a staunch friend to Utah. For years he was a leading member of the bar at Baker City, Oregon, where he became acquainted with Utah people who had extensive lumber interests there. According to many expressions made by Mr. King, he has always honored the work of the pioneers of Utah, who were also the pioneers of irrigation in the West; and the movement inaugurated by him to build a monument to those pioneers, who made possible the reclamation of the Great West by means of turning water on the soil, will be hailed with delight and doubtless carried through successful termination.



## Pleased Beyond Expectation

People who have used Utah-Idaho Sugar have always been more than pleased. The results have always been better than they expected. It has never failed to please the most particular housewife.

No test has yet been found that can disclose a possible fault in this sugar. A trial will prove the correctness of these statements.

Your grocer will gladly supply you with a sack today if you call him. Just ask for—



GOING TO BUILD? Then you need this profusely illustrated, 32 page book. It contains many beautiful illustrations showing the use of brick in the construction of attractive, inexpensive homes. In fact it tells the story of

## BRICK and Their Use

so clearly and convincingly we are certain you will be only too glad to build with brick—no matter whether it be a cottage, bungalow, a mansion, a factory or a public building. Brick is the material that has stood the test of centuries—that is time-proof, fire-proof, heat and cold proof, vermin-proof and at the same time highly artistic. Better send for a copy today—FREE for the asking—without obligating you in any way. A postal will do, or phone to Wasatch 951 and it will be sent to your address.

Salt Lake Pressed Brick Co.  
KEARNS BLDG. SALT LAKE CITY, UTAH  
Dept. U

Enclose this ad. with your request

### ANSWER

The advertisements in this issue either asking your local dealer for them, if does not carry them in stock he may id for them, or you can write direct catalogue and information. Don't forget to mention the Utah Farmer for we are back of every advertisement that appears in our paper.

### QUALITY IN BUTTER.

(Continued from page three)

quickly. Always cool the newly separated cream before adding it to the cream on hand.

(6) If the cream is thoroughly stirred each time newly separated cream is added to that on hand, no lumps will form. The formation of lumps prevents proper sampling of cream for testing and the patron is the loser thereby. Stirring also tends to keep the cream at an even temperature throughout, thus preventing parts of it from fermenting.

(7) The atmosphere surrounding the cream should be free from any undesirable odors; hence the cream should be kept in a clean, well-ventilated place in order that odors may not be taken up by it.

(8) The protection of cream cans during hot weather is very important. During delivery in the summer the cans should be protected from the sun by covering with blankets in order that the temperature of the cream may not be raised more than is necessary.

(9) The intervals between deliveries of cream depend upon the season of the year. It should be delivered at least twice a week in the winter and three times in the summer.

### MOISTURE IN BUTTER

G. A. Gilbert, Colorado A. C.

The amount of moisture in butter varies from ten to sixteen per cent. It is often outside of these limits. But the manufacturer of butter that contains more than 16 per cent water is liable to prosecution, for this is the standard set by the United States government. Moisture in butter is the principal factor that makes overrun. It is an object to secure butter that contains as near 16 per cent water, properly incorporated, as possible, because of the profit in selling the additional water at butter prices.

A high moisture content is not an adulteration in butter. Water is a natural part of butter and compares very favorably with the water content of other food materials. Butter is eaten more as a relish than for the actual food constituents it contains, and it is well known that butter containing from fourteen to sixteen per cent water is just as relishing and palatable as that containing 8 or 10 per cent water, providing it has been properly incorporated. Nor is it possible to distinguish by ordinary means of judging between a good grade of butter having a high moisture content and another having a small amount of water.

"Leaky" butter contains a large amount of free water, which appears as large drops held in pockets through the butter. Such butter will not really contain so much moisture as some that appear dull and dry. Even though a leaky butter does not contain an excess of moisture, it is an undesirable condition and consumers object to it.

The amount of water incorporated depends upon several conditions, most of which are under the control of the maker. The higher the temperature of the cream and wash water, the greater will be the amount of water gotten into the butter. Butter churned at a high temperature will retain its moisture which will not be so easily pressed out during the working process. However, if the moisture is too high, the body of the butter will be spoiled and the loss of fat in the buttermilk will be greater. So temper-

ature itself is not so good a means of control as other conditions.

The amount of churning is probably the most effective way to control the moisture of butter. A very little overchurning, when the butter is in the soft condition, will cause it to take up moisture very rapidly. Continuing the churning until the granules are the size of corn kernels or larger will incorporate more moisture than if churning is stopped when the granules reach the wheat kernel size. The difficulty here is that overchurning usually retains more of the buttermilk which hurts the keeping qualities of the butter. The length of time butter is churned in water influences the moisture content the same way as churning in the buttermilk. The more churning in the wash water, the better is the buttermilk removed, the more water is taken up, and the less leaky will the butter appear.

Another important condition influencing moisture is the thickness of the cream. The richer the cream the more water will the butter retain. This is probably because when thick cream is churned it is impossible to stop the churn when the granules are the same size and shape as they would be with a thin cream. So we have the effect of overchurning. Working butter expels water. Excessive working will decrease the percent of water very rapidly.

The above are the most important conditions affecting moisture. By paying attention to the temperature, the amount of churning and washing, the thickness of the cream and the amount of working, the desired amount of moisture can usually be controlled very effectively.

### HORSE POWER

There are many laymen who think that by horsepower is meant the average load which a horse can pull in continued service. This is not true, however, as the pulling power of horses varies and no definite point could be reached in this way. It is evident that a large horse is capable of pulling a greater load in continued service than a smaller animal.

The term "horsepower" was first used by James Watt, after numerous tests of the load which the average horse could pull in continued service. As the word is used today, it is simply a technical term of power measurement, and is in no way related to old Dobbin.

Horsepower as a technical term expresses the number of pounds lifted one foot in one minute. One horsepower equals the lifting of 33,000 pounds one foot in one minute, or 1000 pounds thirty-three feet in one minute, or one pound 33,000 feet in one minute.

Generally speaking, a horsepower in motors as compared with the horsepower of the animal would mean that the live horse has about four or five horsepower of the technical kind.

EXCURSION RATES TO STATE FAIR, AUXILIARY ORGANIZATION AND L. D. S. CONFERENCE  
SALT LAKE CITY.

Tickets on sale Nephi, Tintic District, and points East, September 27th to October 6th inc. Returning October 12th. All other points, on sale September 26th, to October 5th inc. Good returning until October 15th. Ask for tickets via Salt Lake Route.

**EAR PERFECT TAGS**  
Samples Free  
**ATTACHED INSTANTANEOUSLY**  
Name and Address. Numbered if Desired.  
LEG BANDS for Poultry, Pigeons, Turkeys  
SALT LAKE STAMP CO. Salt Lake, Utah.



### WHY HAUL THE EXTRA BURDEN?

Friction means a shorter life for horse, harness and axles.

## MICA AXLE GREASE

Stops friction. Makes a perfect bearing surface.

Dealers everywhere  
THE CONTINENTAL OIL CO.  
(A Colorado Corporation)



## Registered BULLS

## Short Horn and Herefords

If you want one or a carload, phone, telegraph or write at once

**E. W. Patrick**  
Marion Hotel  
Ogden, Utah



## Markets

The market situation has not changed materially as far as local products are concerned. There is a change, however, in the flour situation. Eastern flour for December and January delivery is being quoted 50 and 60 cents cheaper than that for present delivery, which indicates that the supply of wheat is such that the market will go down about 10 cents in the near future. The market for Utah wheat, however, is keeping up, and Utah growers are shipping to Missouri river points to supply deficiencies caused by storms and floods.

The matter of shipping Eastern flour should be of real concern to Utah wheat growers and millers. An authority on the question declares that if the mills of Utah were adapted to grinding hard wheat there would be no necessity for shipping in Eastern flour at all. As a matter of fact, Turkey Red wheat raised in Utah and Idaho at the present time is shipped to Missouri river points, ground up into "Eastern flour" by hard wheat mills, and shipped back to Utah with the freight for shipping the wheat out, which amounts to 45 cents a hundred weight in carload lots, and the freight for the flour back, which is 50 cents more, in addition to the profit charged by the Eastern handlers.

The Utah crop this year is two and a half million bushels over the average. This means that the farmer will be able to dispose of his crop to advantage to supply the deficiency of other sections, with corresponding increased prosperity to Utah growers.

The following prices are for products F. O. B. Salt Lake City. A 20 cent freight rate and local handler's charges must be deducted in computing prices paid in the state, which for wheat run about \$1.40 to \$1.45 per cwt:

### LOCAL MARKET

	Jobbing	Retail
Wheat, chicken feed, cwt.	\$1.65	\$ 1.75
Wheat, milling, cwt.	1.75	1.85
Oats, Mont. cwt.	1.55	1.65
Oats, Utah and Idaho.	1.50	1.60
Timothy hay, ton, baled.		18.00
Mixed hay, ton, baled.		17.00
Alfalfa, ton, baled.	14@15	
Barley, whole, cwt.	1.40	1.50
Barley, rolled, cwt.	1.50	1.60
Flour, family, cwt.	2.10	2.40
Flour, straight grade, cwt.	2.20	2.50
Flour, high patent, cwt.	2.30	2.60
Corn, cwt.	1.90	2.05
Corn, cracked, cwt.	2.00	2.10
Cornmeal, 10 lbs., bale.	2.80	
Cornmeal, 9 lbs., bale.	2.55	
Bran, cwt.	1.35	1.50
Shorts, cwt.	1.50	1.65

### CHICAGO WHEAT MARKET.

Wheat, No. 2 red, \$1.15@1.16; No. 3 red, \$1.11@1.14; No. 4, red, \$1.04@1.10; No. 2 hard, \$1.17.

Corn, No. 2 yellow, 73½@74¼c.  
Oats, No. 3 white, 34½@35c; standard, 38¾c.

Rye, No. 2, 97c.

Barley, 50@60c.

### KANSAS CITY LIVESTOCK QUOTATIONS.

Hogs—Higher; bulk, \$7.00@8.00; heavy, \$6.80@7.40; packers and butchers, \$7.25@8.00; light, -7.50@8.05; pigs, \$6.75@7.75.

Cattle—Prime-fed steers, \$9.50@10.00; dressed-beef steers, \$7.90@9.40; western steers, \$6.50@8.75; stockers, and feeders, \$5.75@7.85; bulls, \$5.00@6.00; calves, \$6.00@10.00.

Sheep—Steady; lambs, \$7.75@8.35; yearlings, \$5.75@6.75; wethers, \$5.25@6.25; ewes, \$5.00@6.00.

### LIVE STOCK FARMING.

Grain farming reduces the fertility of the soil. Stock farming increases it. Grain farming reduces the humus in the soil. Stock raising increases the mechanical condition of the soil. Stock farming improves it. Grain farming fosters weeds, plant diseases and insects while stock raising decreases them. Stock raising develops thrift—pay as you go. Grain farming develops the credit system. Grain farming brings on the mortgage. Stock raising pays it off. The labor for grain farming is expensive while that for stock farming is cheaper in that it is engaged by the year. Grain raising is dependent on the season. Stock farming is quite independent of the season. Taking care of stock is splendid training for the boys and girls. People with the instinct for stock raising are and have been the dominant people of the world. Grain farming is a soil robber; hence it is only possible on a new soil and then only for a short time.

The aim of every farmer should be to gradually work into some phase of live stock farming. This results in rotation of crops and a home market for the grain and hay. In this way, as much grain can be grown on the farm as though it were all given to grain, as the yield will be larger due to increased soil fertility, fewer weeds, less plant disease, better mechanical condition of the soil, etc.

The only permanent agriculture is that which is based on live stock farming and permanent agriculture means profitable agriculture.—C. W. Hickman, Idaho Experiment Station.

## Correction

In our issue of Sept. 18, we made a typographical mistake in the Cannon Brothers advertisement. The copy in the advertisement, issue of Sept. 18, read "55 per cent butter fat" and it should have been "5 PER CENT butter fat. Read the corrected advertisement on the back page of this issue.

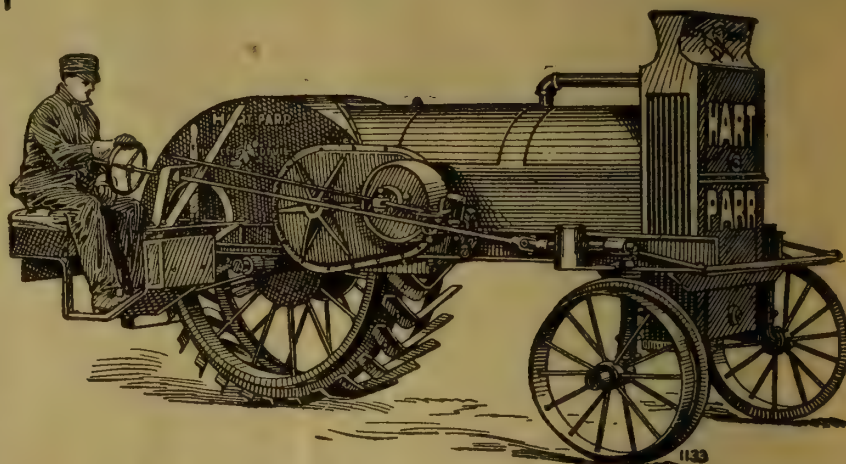
### MOTOR CAR SERVICE—SALT LAKE ROUTE. BETWEEN MOAPA AND ST. THOMAS.

Effective August 26th. Daily except Sunday. Leave Moapa 11:00 a. m. Arrive St. Thomas 1:00 p. m. Leave St. Thomas 4:00 p. m. Arrive Moapa 6:00 p. m. Handling passengers, express, and L. C. L. freight.

When a man has "wheels" he thinks he is the whole machine.

### THE OLD RELIABLE

# Hart-Parr Oil Tractors



### THE "LITTLE DEVIL" OIL TRACTOR

This good Little Devil, uses the cheapest fuel oil on the market. Does the work of EIGHT GOOD HORSES. Eats nothing when not at work and does not get tired. It is automatically cooled. There is no danger of freezing or "liming up." Two speeds forward, two speeds reverse, 1½ to 3½ miles per hour. Lightest tractor on the market of same horse power. Does every thing 8 horses can do except consume hay and grain, and drive fast. The ideal tractor for small acreage.



### THE STANDARD LARGE TRACTORS

#### Oil Cooled Not Water Cooled

Back of the HART-PARR OIL TRACTORS is the experience of over FIFTEEN YEARS of actual field experience. The Hart-Parr was the first successful OIL TRACTOR ever built and they have made good from that day to this.

The profit on your investment depends on the WORK YOU CAN DO, not the time you spend experimenting, that's why you should buy a HART-PARR OIL TRACTOR.

Write for descriptive circulars and prices to

## SIDNEY STEVENS IMPLEMENT COMPANY,

OGDEN AND LOGAN, UTAH

PRESTON AND MONTPELIER, IDAHO

**AGENTS!**  
**WAKE UP!**  
**Make \$30 to \$60 Weekly**

Selling our new and unequalled Lanterns, Portable, Hollow Wire Systems and Gasoline, Devices for Lighting City and Rural Homes, Stores, Halls, Churches. Most Powerful Light Known.

**WE LOAN YOU SAMPLES**

Absolutely safe. More brilliant and many times cheaper than gas or electricity. Guaranteed five years. Everyone a possible customer. Send for free illustrated catalog. Large commissions. Exclusive territory free.

**SUNSHINE LIGHT CO.**  
SALT LAKE CITY, UTAH



# Conference and State Fair Visitors

We invite you to make our office your headquarters

Come in and leave your grips

See our Model Farm Exhibit at the Fair. All crops actually growing.

You'll be interested in our remarkable bargains in income-producing farms, which you can buy on very easy terms. Let us show you some.

Come in and get acquainted

## Kimball & Richards

"Land Merchants"

58 Main Street.

Salt Lake City, Utah.

### THE FARMERS DEMAND FOR ELECTRICITY

In installing an electric motor it would not be necessary to install the fifteen horsepower size, unless the farm required the heaviest work in grinding, ensilage, cutters, shredders, huskers, threshers, shellers. The 5 and 2-horsepower sizes would serve admirably all demands for power below this. Though heavy baling might overload the 5-horsepower, on emergency, it would meet such demand up to 25 per cent overload, at least, temporarily, as in baling operations. There would be quite a variable demand, from these several types of motors distributed throughout the year. Thus, huskers, shredders, feed grinders, and like operations bring heaviest loads, in fall, winter and spring. Domestic pumping would be heaviest during the summer, especially with truck garden and spraying, along with ensilage work, bailers, hoists, etc. In general therefore, the load for the entire year would average up fairly well; and probably from thirty to seventy-five kilowatt hours, per month, according to the size of the farm and the class of produce, in the main, not including dairying. The rates for this electric power would usually be somewhat lower still than that for domestic service, possibly from one-quarter to one-third of the lighting rate, according to the hours of the day when it would be most called into use; or, from \$1.50 to \$5.00 per month, for all farm electric power.

It is in this particular that the farmer has much the advantage of the city user. His heaviest loads are

during the summer months, rather than in the winter; and, they are essentially day loads rather than night loads.

The farmer is up and at it, with a half day's work done (by the city's eight-hour standard) before the city man is out of bed. Hence the very cheap rates at which he gets electric energy for all of the work which he can crowd into this early morning period. It has been especially observed on rural and farm electric lines that the highest demands come from about 4:30 to 6:00 o'clock in the morning in the summer; and from 6 to 7 o'clock in the winter, with a shading off during fall and spring. At night, on the modern farm, the winter chores are usually well through by 6 o'clock, after which the farmer only uses the current for a few lights.—William S. Aldrich, Colorado A. C.

### WARNING AGAINST ASPHYXIATION.

Farmers are again reminded of the danger of death from asphyxiation during the filling of the silo. Large amounts of carbon dioxide and produced in the silo from the green crop and may collect in dangerous quantities if conditions become favorable. To avoid such an accumulation of the gas, the doors should be left open as long as possible. Men should not stay in the silo when the blower is not running, and especially they should not sit or lie on the fresh silage. If the work has been interrupted for any length of time men should not again enter the silo until the blower has been running for a few minutes. This removes the dangerous gases. In the case of a pit silo,

men should never remain in the silo when the blower is not running, and the blower should always be started before anyone enters the silo.

### FILL SILOS RIGHT

J. G. Watson, Missouri College of Agriculture.

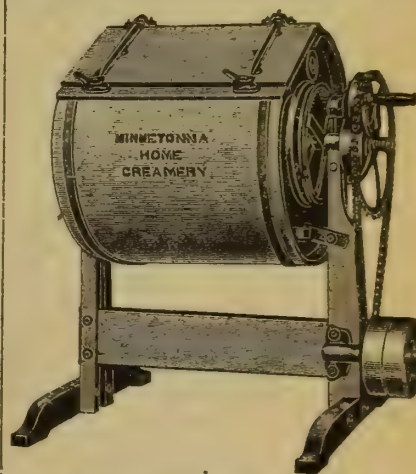
Don't wait too long to fill the silo. Begin as soon as the corn is right for fodder. The kernels should be in the dough stage but dented and the lower leaves turning brown. Let the corn mature as much as possible without becoming so dry that water must be added to make the silage pack solidly and ferment properly.

Cut into pieces half to three-fourths of an inch long to make them pack well and to prevent waste in feeding. This takes more power but is worth it. Pack well with concrete tampers, keeping the silage higher at the wall than in the center.

Fill slowly if possible letting the silage settle a day or so at a time. This makes it keep better and increases the amount the silo will hold. This amount may be still further increased by using woven wire to hold more silage at the top. It will gradually settle into the silo but tends to spoil while doing so. If more silage is added after such settling, take out the spoiled layer at the top.

If caught by frost, the corn for silage should be cut before it dries out. After that, add water. The corn may even be shocked to put in at a more convenient time or to refill the silo if enough water is added.

Life appears to me too short to be spent in nursing animosity or registering wrongs.



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**Strevell-Paterson**  
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State Agent  
Salt Lake City, Utah.



## THE HOME

### HOME ECONOMICS ASSOCIATIONS PROGRAM AND SUGGESTIONS.

We hope to make this a record year in the use of the Free Correspondence Courses, since by this means text books are used more intelligently and direct instruction from the various college departments is obtained. Any number of these courses may be taken by individual members, but it is suggested that only one be taken at a time. The method used in general by the Associations the past year was to make the topics studied by their members a part of the regular program. The member taking the course became the teacher for the day. We expect to make this a Health year, both from the personal and community standpoint. These terms may include many phases, such as nutrition, personal and social hygiene, home and school sanitation, conservation of energy as applied to home management and allied subjects. Any of the above subjects may be taken by means of correspondence.

We would urge the chairmen of the program committees to keep in close touch with the various committees of their organization, while the chairmen of all committees should keep in touch with the Faculty of the College. This may be done through the services of the home demonstrators and the county agents, who will see that the knowledge desired is either given directly or application made to the head of the college department handling the subject. A list of these agents and demonstrators is given at the close of this article.

We would urge that the presidents of Associations keep in touch with the various organizations of their own county, and to this end a list of neighboring groups in the various counties is given at the close of this article.

#### Program Topics From Which To Choose For November Meetings.

Table service: Correct method of setting the table; linen, plate and china. Serving the family meal. Serving meals for company. Table etiquette. Training children at table. Home Furnishing and Decoration:

See Outline Home Furnishing and Decoration, by Calvin Fletcher.

#### Demonstrations:

Setting and serving a meal. Sauces for meats and desserts. Exhibition of menu and place cards for Thanksgiving dinners.

#### NOTES FROM ASSOCIATIONS.

The resignation of Mrs. Lorin A. Merrill from the presidency of the Richfield Association, and the general supervision of the Associations in Sevier County, is a matter of keen regret to everyone in that community. Mrs. Merrill's presidency has been one that may be taken as an example by the leaders of all organizations, from the fact that she made the work an integral part of her life, losing no opportunity to seek for means to make the meetings both interesting and profitable. It was also characterized by an unselfish desire to go beyond the bounds of her own Association, so that the good work might reach the outlying districts. She not only organized, but was the continual advisor of these Associations, and, in

spite of a busy home life, found time by means of telephone and visits to keep in touch with their work. We must remember, however, that the strength of a work depends upon its enduring qualities, and the finest tribute that the Associations of Sevier County can pay to their beloved leader is to show her by their increased usefulness and steadfastness to the cause that the labor and time she spent were not in vain. We are certain that Mrs. Christiansen, who has assumed the presidency, will make an ideal leader, and that the Associations will give her their warm support.

The following report from Bear River City has been received:

"On Tuesday evening the Home Economics Association very delightfully entertained at a lawn party on Albert Holmgren's spacious lawn. The lawn was profusely decorated with Japanese lanterns, making a most pleasing sight. The program committee had prepared a novel and interesting program, one feature of which was the singing of different groups. One group of boys sang a number of cowboy songs, while a group of girls were costumed as Indian princesses and sang all the old favorite Indian songs. Moroni Mortensen gave a short talk, and Octavo and Leona Holmgren each gave an interesting reading. The Bear River Military Band was present and rendered a number of splendid selections.

"The serving of the refreshments was very unique, each thing being served from a beautifully decorated push cart, attended by two girls. The first cart contained the trays, napkins and glasses, next came the sandwiches, then the punch, then the ice cream and last the cake, nut loaf and moonlight cake. One hundred and twenty-five persons were present, and all classed it as the best social event of the season. This is the first entertainment gotten up by this Association, as it was just recently organized, but all expressed the hope that it would not be the last."

Owing to the activities of Miss White, the Home Demonstrator in Millard County, several new Associations have been organized. We shall be glad to publish reports from these Associations when they have started their work.

#### THE SCHOOL LUNCH

The following suggestions are offered for the putting up of lunches for the school children:

Cleanliness and Neatness: Cleanliness is an absolute necessity. A box made of granite or aluminum is preferable on account of its washable qualities. Whatever the nature of the receptacle it must be sterilized every day. Sunshine and boiling water are sure germ killers. Neatness in packing is desirable. Oiled or tissue paper for sandwiches, a separate wrapper for each article, paper napkins, spoons, jars or glasses with screw tops and individual drinking cups are all part of the lunch box equipment.

Materials and Recipes for School Lunches:

#### Eggs.

Plain custards, variously flavored, baked in cups.



## "Fred"~

"Put this can of Ghirardelli's Ground Chocolate in your basket. You'll find it the most convenient, nourishing, delicious, economical food beverage you can get. There are imitations but I don't handle them as my trade always demands Ghirardelli's."

And Fred took his grocer's advice. He now uses Ghirardelli's Ground Chocolate as a beverage—morning, noon and night. You can make a cup in a minute. For unusual desserts it hasn't an equal.

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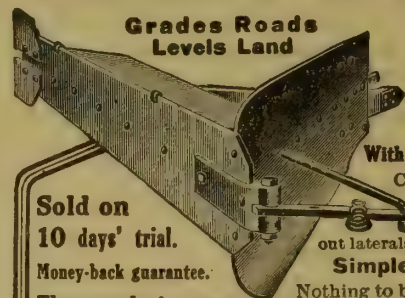
In ½-lb., 1-lb. and 3-lb. hermetically sealed cans. There's a double economy in buying the 3-lb. can.

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Salt Lake City, Utah



Caramel custards.  
Escalloped eggs.  
Stuffed eggs.

#### Vegetables.

Any left over vegetables may be seasoned and put in a cup or glass. Rice pattie.  
Cold corn, to which custard mixture has been added and baked.  
Cold sweet potatoes, seasoned, roll- and fried.  
Onions stuffed.  
Tomatoes, stewed, stuffed, baked, ad. Fresh tomatoes.

#### Sandwiches.

Put bread a day old; soften butter and spread.

#### Fillings.

Meats—pork, ham, bacon, chicken any left over. Put through chop- season. Catsup, salad dressing cream may be added.  
Canned salmon, potted.  
Cottage cheese, with or without und nuts.  
Peanuts or common walnuts finely und, moistened with cream.  
Nuts and figs, dates or raisins und together.  
Raisins stewed with sugar and small ount of water till thick.  
Date paste.  
Cheese—Put through grinder; sea-

#### Puddings.

Cheese pudding; also called cheese due.  
Boiled rice, baked with cheese.  
Macaroni with cheese or cheese andatoes.  
Macaroni with cheese and hard led eggs.  
Rice mold, flavored.  
Rice, tapioca or sago with fruit.  
Rice, tapioca and sago with custard.  
Dia meal pudding.  
Chocolate bread pudding.

#### Cookies.

Plain sugar cookies, Peanut, Cocoa-, hermits, molasses, spice, oatmeal, namon cakes, date cookies, ginger-ad.

#### Bread.

Nut bread, oatmeal mush bread, Moravain bread.

#### Raised Rolls.

Rusks—especially good, cannamon rolls, scones, coffee bread.

#### Fruit.

Fresh fruit should be used when- ever available.

Counties With Neighboring Groups of Home Economics Associations:

#### Box Elder.

Garland.....Mrs. Stephen Longstroth  
Willard.....Miss Mary Taylor  
Brigham.....Mrs. Abel S. Rich  
Tremonton.....Mrs. L. S. Mann  
Fielding.....Sylvia Welling  
Bear River City.....Mrs. Albert E. Holmgren

#### Cache

Cornish.....Mrs. M. Troseth  
Hyrum.....Mrs. Margaret Cutler  
Newton.....Mrs. Marinda Hansen  
Richmond.....Miss Lenora Merrill

#### Duchesne

Duchesne.....Mrs. Florence Madsen  
Roosevelt.....Mrs. W. A. Miles  
Myton.....Mrs. E. L. Williams

#### Emery.

Ferron.....Mrs. Nettie Hansen  
Orangeville.....Mrs. Kate Fullmer  
Cleveland.....Mrs. Ruth Nielson  
Huntington.....Mrs. M. J. Blackburn  
Emery.....Mrs. Lydia Peacock

#### Sevier.

Richfield.....Mrs. Christiansen  
Monroe.....Mrs. Maggie Magleby  
Sigurd.....Pauline L. Dastrup  
Glenwood.....Mrs. Pearl Hendrickson  
Central.....Mrs. Rinda Hawley  
Elsinore.....Mrs. J. B. Hansen  
Salina.....Miss Mary Christiansen  
Joseph.....Mrs. Marion Henry

#### Utah.

Lehi.....Mrs. S. L. Wells  
Lehi, R. F. D.....Ella Ernst  
Pleasant Grove.....Mrs. A. E. Cooper  
Spanish Fork.....Mrs. Delila Hughes  
American Fork.....Mrs. Willis Bromley

#### Weber.

Ogden, R. F. D. No. 3.....Emily Folkman  
Plain City.....Mrs. Florence Jenkins  
Hooper.....Mrs. Lillian Widdison  
Clinton.....Martha E. Bingham  
(P. O. Hooper)  
Pleasant View.....  
(Ogden R. D. No. 3).....

#### Washington.

Washington.....Mrs. Caddie Nielson  
Santa Clara.....Mrs. Nellie Hafen  
St. George.....Mrs. Eva Webb

#### COUNTY AGENTS AND DEMONSTRATORS:

Name.	Address.	Counties Covered.
H. Stewart	Price, Utah	Carbon-Emery
Erin A. Merrill	Richfield, Utah	Sevier
Joseph P. Welch	Hinckley, Utah	Millard
L. Harris	Roosevelt, Utah	Uinta-Duchesne
Robert J. Webb	Sandy, Utah	Salt Lake
A. Christiansen	Beaver, Utah	Beaver
B. Ballantyne	Provo, Utah	Utah
R. Parry	Cedar City, Utah	Iron
Eston Thomas	Ogden, Utah	Weber
Miss Blanche Cooper		Tooele-Box Elder
Miss Hettie White	Hinckley, Utah	Millard

#### HALF A CAN OF TOMATOES

That much food is wasted because usekeepers do not know how to use ractively small quantities that y be left over, is the belief of Miss erlin of Colorado Agricultural llege.  
Half a can of tomatoes may be ickly made into Tomato Sauce ich will glorify a meat loaf, bread- veal chops, plain omelet, or a h of baked beans or plain boiled caroni.

#### Tomato Sauce

¼ c. tomato juice and pulp.  
tbsp. butter.  
tsp. salt.  
tbsp. flour mixed to a smooth, thin te with cold water.  
a few grains cayenne pepper.  
dd the flour and water mixture he tomato juice and boil from o 10 minutes, stirring all the time, ove from the fire, add butter, and pepper, and, if desired, 1 o. Worcestershire sauce.  
ave you ever made Mexican

Sauce and heated in it thin slices of cold boiled or roasted beef?

#### Mexican Sauce

1 onion.  
1 red pepper.  
¼ tsp. celery salt.  
2 c. of tomato juice and pulp.  
1 green pepper.  
2 tbsp. butter.  
1 tbsp. Worcestershire sauce.  
Chop onion, cook for 5 minutes in butter, add peppers finely chopped, then add the tomatoes and seasoning. Simmer for 15 minutes then add the meat.

#### EXCURSION RATES VIA SALT LAKE ROUTE TO SALT LAKE CITY

Account State Fair, Auxiliary Or- ganization and L. D. S. Conference. Tickets on sale Nephi, Tintic Dis- trict, and points East September 27th to October 6th inc. Returning Oct. 12th. All other points, on sale September 26th to October 5th inc. Good returning until October 15th.



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## How to Measure Land

Homesteads Monthly Coyote.

Every land owner has frequent occasion to measure land. We will not undertake to show laymen how they can do the work of an experienced surveyor, but in this article we will try to explain how to accurately measure the acreage of small tracts of land. Any person who understands simple arithmetic can accurately measure acreages.

The best measure for those who have not surveyor's chain is a piece of smooth wire 66 feet long. To make it, take a piece of wire somewhat longer than this and stretch it snugly between two stakes. About a foot from one end make a small nick with a file, just so it can be seen but not so as to weaken the wire. Then measure with a square or rule the 66 feet and make another mark. For convenience it should be marked into rods, which will be one quarter of the length of the measure. A little paint smeared onto the wire near the marks will help to find them and a string should be wound tightly around the wire at the end marks. Then fasten a wooden handle onto the wire a few inches beyond the outside marks. For the fractional distances a lath or other small stick about 40 inches long should be marked off into links. A link is a hundredth part of 66 feet, or 7.92 inches. The heavy black line along the margin of this article can be used as a measure for the links and these can be marked on the stick with a pencil. For marking pins, small sticks can be used, or wire pins made from heavy gauge wire pointed at one end and bent into a ring at the other. There should be eleven of these where large tracts are to be measured. In using this measure two men stretch it along the course to be measured, one holding one end so that the end mark comes opposite the starting point and the other sticking a pin in the ground at the other end mark. They then advance the length of the measure and repeat. The fractional portions are measured with the stick and the result set down in chains (66 feet) and hundredths or links.

To ascertain the acreage of any rectangular piece of land multiply the length in chains by the breadth in chains and move the decimal point one place to the left. Thus; if a piece of land is 6 chains and 14 links long (6.14 ch.) and 2 chains and 78 links wide (2.78 ch.), multiply 6.14 by 2.78 which gives 19.0692, moving the decimal point one place to the left give 1.90692 or a little more than one and nine hundredths acres. Suppose that a piece land is  $32\frac{1}{2}$  chains long and 12 chains wide. 12 times  $32\frac{1}{2}$  gives 390 square chains. Moving the decimal place gives 39.0 or even 39 acres.

Suppose that the piece of land is wider at one end, then it should be measured at both ends and the two end measurements added together and divide this sum by two, which gives the mean width. Multiply the mean width by the length and proceed as before. Irregular shaped pieces of land must first be divided into rectangles or right triangles for easy measurement.

To find the acreage of a right triangle (a triangle with one square

corner) multiply together the two sides next to the square corner and move the decimal place one point, then divide by 2. This is the area in acres.

### TREATMENT FOR SMUT.

Woods Cross, Utah.

Utah Farmer:

In treatment for smut in wheat with formaldehyde what parts to use for best results?

After treating grain does it have any effect on it, by standing over for some time before planting. Thanking you for an early reply.

Yours respectfully,

O. A. JOHNSON.

Answered by Dr. Geo. R. Hill, Jr.,  
U. A. C.

Wheat should be soaked for fifteen minutes in a solution of Formalin (one pint to forty gallons of water). But very little of the grain should be injured by the treatment. After the grain is treated it should be placed in a bin which has been disinfected with formaldehyde or into clean or treated sacks. To prevent reinfection it can be planted very shortly after treatment but if it is kept for any length of time it should be spread out to dry.

### SILO SEALING SUGGESTIONS

Cut in cornstalks or oat straw or sow with oats to shut out air.

There is always some loss on the top of the silage unless feeding is begun as soon as the silo is filled. Where the silage is to stand for some time before feeding, it is customary to run in three or four loads of cornstalks from which the ears have been removed. The material is packed thoroughly; then a liberal supply of water is added which will help to seal the silo and only a very small amount of waste will result. Some farmers use oat straw as a covering; others soak the top of the silage with water and sow oats which, when they germinate, form a dense mass which shuts out the air and keeps the silage from spoiling.—J. G. Watson, Missouri College of Agriculture.

## Little Sir Galahad

By Phoebe Gray

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**L**ITTLE SIR GALAHAD is more than a fascinating story for children—it is a book for grown-ups as well, and therein is the secret of its broad appeal. It preaches a powerful sermon on intemperance—a sermon that will have a lasting good—that has had a far-reaching influence already. "Little Sir Galahad" is a book that ought to be in every home because of its splendid inspiration and good cheer.



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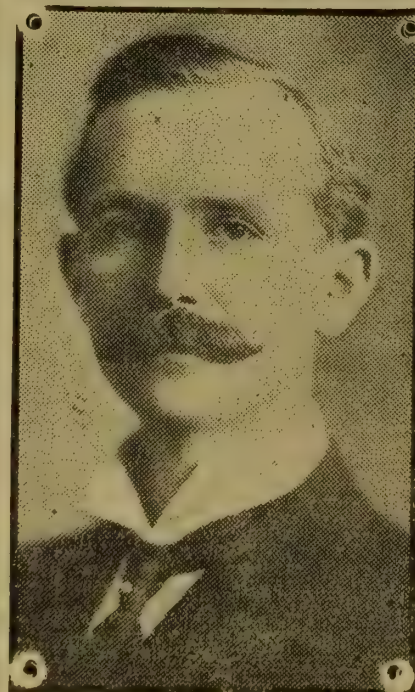
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Murray, Utah.

**THE UNDESIRABLE WORK OF  
A CREAMERY PROMOTER.**

A great deal has been said in regard to the work of the average creamery promoter, but never the less these promoters have been very active this summer. Several creameries have been organized at places where conditions did not at all warrant the building and equipping of a creamery. At one place such a creamery was worked up by a promoter and sold to the farmers for almost twice the sum it should have cost, and although it has been ready to run for over a month, it is said that not a wheel has turned yet. The disgusting thing

about the whole matter is the fact that there are very few cows within a six mile radius of this creamery and little or no cream to make into butter.

At another place a creamery is being built at the present time at a cost of \$5500.00 which should not have cost more than \$3000. As far as can be learned, very little cream is being produced at this point, a cream receiver stating that about six cans of cream each week was shipped out from that point last winter over the railroad. This amount of cream is quite insufficient for the operation of a creamery, and further information leads one to believe that the farmers are not greatly interested in dairying in this vicinity.

These are typical promoters creameries and if the creameries do not succeed, dairying will suffer a setback of at least five years as a result.

If the farmers in any certain community feel that conditions are favorable for a creamery, they should first refer it to some one who is well informed on conditions desirable for a creamery before placing the matter in a promoter's hands. The Dairy Department has such information at hand and stands ready to assist farmers in the construction of creameries.—O. W. Holmes, Department of Dairying Idaho.

**DO NOT BURN THE STRAW.**

It has been a practice with some people to burn their straw. It is wasteful and should not be practiced.

Rotation investigations by many of the experiment stations, indicate that vegetable matter is a very important ingredient in the soil and that straw from any of the grains, returned to the land, adds materially to the production.

Hopkins, of Illinois gives the value of oat straw for manurial purposes at \$3.30 per ton. Wheat straw is valued at \$2.58 per ton. The same relative comparison gives the value of fresh farm manure at \$2.22 and barnyard manure at \$2.34 per ton.

Any one who destroys a ton of wheat or oat straw, therefore, is destroying more fertilizing ingredients than are contained in the average ton of manure from the barnyard.

The place for the straw is back on the land. If it can go through the medium of live stock, as food and bedding for them, that is the best way

**SAVE YOUR CALVES**

**AND YOUR BANK ACCOUNT TOO**

Listen to what Mr. Beard says:

Blatchford's Calf Meal is the best calf food I have ever known. For raising calves it is just as good as cow's milk, and doesn't cost one-half as much. I can say that it will pay any one over 100 per cent that has calves to raise. I want another 100 pound bag today.

Yours very truly,

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Salt Lake City.

to return it. Where sufficient live stock is not raised, however, to use all of the straw in this way, the straw should be returned directly to the land. It can be spread thinly and plowed under, or better yet it can be used as a top-dressing or mulch for the small grain fields and on the pastures and meadows. If it is applied to the pastures and meadows, it would be better to make the application in the fall. On the grain fields it can be used as a dressing after the grain has been sown. Machines are made for spreading it thinly and evenly.

**SUGGESTIONS ON SEED**

**CORN SELECTION**

Because of unusual conditions this year, many farmers will find it desirable to practice early field selection of seed corn.

Seed corn may be safely selected in the stiff dough stage, if properly cured. The vitality of corn selected earlier than this is likely to be uncertain.

Early picked seed corn must begin drying rapidly at the earliest possible moment. If left lying in a pile for as much as a few hours the growth of mold is likely to start.

In drying immature corn, it is important to keep the ears from close contact.

While drying, rain-proof buildings which provide a free circulation of air and a temperature above freezing are highly desirable.

Well-preserved seed corn a year old is very satisfactory.—Nebraska, College of Agriculture.

**FOR SALE**

A registered Holstein bull three years old. Gentle and good size. Mostly white. For further information write.

LELAND STEVENS

Oakley

Utah

**POINTS TO REMEMBER**

**IN MAKING SILAGE**

Corn intended for silage is at the proper state of maturity when the kernels are well dented and are beginning to glaze.

Corn in good condition to be put into the silo will give good results if cut three-fourths of an inch in length. If corn is fairly dry, it should be cut into pieces not over one-half inch in length.

Field loading of either loose or bound corn can best and most economically be accomplished by allowing two men to hand up and one to arrange the bundles on the wagon.

When bundles are carefully loaded, the time spent in unloading is 40 per cent less than when the bundles are loaded promiscuously.

In loading green corn, the butts at the front of the wagon should be opposite to those at the rear when wagons are to be unloaded from the center toward the ends.

All corn in the silo should be carefully and thoroughly tramped down in the silo so as to exclude as much air as possible.

It doesn't take a good looker long to find a husband.

People would rather listen to a bank account than a hard luck story.



## Agriculture Lesson XII

J. C. Hogenson.

**Soil Texture.**—Texture in soil has reference to the size of the elements which give to it its structure. Just in the threads of a piece of cotton cloth or made by twisting together varying numbers of small fibers, making the threads coarse or fine, so is it with soils, they are composed of granules of varying sizes formed out of soil grains which are cemented together more or less firmly. A soil is in good tilth when its granules are neither too fine nor too coarse, and when they are not too firmly cemented together.

The per cent of pore space in soils varies from 25.95 to 47.64 and the amount of water which a soil will hold depends upon the per cent of pore space.

The difference in structure between a sand and a soil is that a sand is composed of simple separate grains while a soil is composed of granules consisting of a number of soil grains. Just as cloths differ because some are twisted from finer and others from coarser wool so soils differ in having their granules made of coarser or finer soil particles. Then too just as one cloth differs from another in having its threads loosely twisted while another is hard twisted, so our soil differs from another in the degree of firmness with which the soil particles are cemented together.

Again just as one fabric may be loosely woven while another is fine so one soil may have its granules more strongly cemented together than another making it hard to work and heavy; while another is light and mellow. When a soil becomes puddled this granular structure is broken down and each soil grain is separate and by itself so that they fall together into the closest possible arrangement making the soil almost impervious to air or water. If a soil grain fits right in between two grains just beneath it we get the closest possible packing, while if one soil grain lies directly above the one below we have the loosest possible packing. Neither of these arrangements is likely to be found in natural soils, as soils are never made up of the same sized soil particles. The pore space of soils is determined in the following way: Pack dry soil in a cylindrical vessel containing 100 c c then weigh and complete as follows:

Vd—W

—P

Vd

"V" volume of vessel in c c. "d" is specific gravity and "W" is cut of soil in grams.

### Specific Gravity of Soils.

The average specific gravity of soils is 2.65 that is it is 2.65 times as heavy as water. The apparent specific gravity is found by dividing the volume weight of soil by volume weight of water, and varies from 1.2 to 1.6 while the real specific gravity is found by dividing the weight of the soil by the weight of water it displaces. The structure of the soil depends upon the variation in the water content of the soil, a soil that has alternate wetting and drying has a better texture or structure than one which is all the time wet or dry because it has all the moisture it requires and also all the air needed to keep it in good condition. If it is all the time wet the air is driven out and the soil becomes water logged and in being handled the least bit its struc-

ture is destroyed and puddling is the result. If the soil is all the time dry the water films around each soil grain contracts and practically disappears and the formation of clods is the result in soils poor in organic matter. The structure of the soil depends also upon variations of temperature, including freezing and thawing of soil water which has the effect of breaking down the large clods and in pulverizing the soil thus making its texture better. Decaying organic matter has a tendency to raise the temperature of soils. Organic matter increases the water holding power of the soil by making it more porous and open. Plowing also increases the water holding power of soils. It loosens and pulverizes the soil to the depth to which it is plowed, thus creating a reservoir for the storing of moisture. The depth to which we should plow depends upon the nature of the soil and the time of year. There is a condition of moisture peculiar to each soil at which it will be left with the best possible texture after plowing. If the soil is to wet the crumb structure which is essential especially to a clay soil will be partly destroyed, if too dry the furrow slice will not shear into the layers and the soil will not be pulverized fine. The water content should be such that the soil squeezed in the hand will hold its form but will easily crumble to pieces and not be at all pasty. The plowing should usually be about 8 inches, depending upon the amount of moisture in the soil and whether the land is arid or humid. Plowing when rightly done has the effect of dividing the soil slice into thin layers which slide over one another. If the plowing be deep the shearing effect upon the soil is greater and the soil is pulverized better than if the plowing be shallow. The form of the plow should be adapted to the soil. If the soil has a tendency to be too open and porous and is naturally coarse grained, it should be plowed with a steep mold board or disc a little wet and as deep as possible. If the soil is too close textured, and is heavy and soggy, it needs a slanting and less steep mold board and should be plowed a little dry.

Rolling the land tends to compact the soil thus causing capillary connection to be established with the lower layers and water evaporated from the surface. Cultivation of the surface, thus forming a mulch, checks this upward capillary movement of water and causes more to remain in the portion stirred with the plow than before. Cultivating also allows air and heat to enter more readily which are two necessary conditions of plant growth. A good smooth cultivation allows the sun to strike all portions of the surface soil alike thus causing an even temperature the least possible evaporative surface is also exposed. In lumpy soils evaporation takes place more rapidly thus cooling the surface.

Roots of plants in penetrating the soil have a tendency to separate the soil granules by working their way through them and by taking the water and dissolving the mineral food which they contain. Certain chemicals such as lime when added to a clay soil have the power to cause a flacculation of clay grains thus forming larger granules. If lime be added

(Continued on page fifteen)



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Then see the  
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Trains leave Salt  
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Via



Following Rates Apply From Salt Lake City.

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Los Angeles, via South- .....	
ern Pacific .....	40.00
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Salt Lake Route.....	35.00
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Side trip rate Los Angeles to San Diego and return via rail \$5.00, and via steamer \$4.00, in connection with circuit tour tickets.

Tickets on sale daily to November 30, 1915, inclusive.

LIMIT, three months from date of sale, but not to exceed December 31, 1915.

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City Ticket Office



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## BARGAINS.

One 16-Horse Steam Tractor.  
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Have been used for short time, but are in first-class condition.  
Write for price and details.  
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My winnings at Idaho State Fair 1913, were 13 first, 3 seconds, champion boar and sow, and champion fat barrow. At a Tri-County fair held at Jerome, Ida., I took all but one second. I have anything wanted in Chesters from a weanling pig to a champion boar or sow at prices all can afford. High class stock. Write me.  
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We carry a large stock of the Best Vegetable Parchment Butter Wrappers and Especially Prepared Ink for Printing the same. We furnish them Postage Prepaid at the following Prices, money to accompany order.

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200	\$1.25
500	\$2.00
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1240 acres in high stage of cultivation, well stocked, independent water right, fully equipped with buildings, sheds, barns, farm implements, etc.; all fenced. Located near Richfield, Utah. \$4500.

450 acres, well stocked, highly improved, near Springfield, Idaho; \$15,000. Will take some Salt Lake property.

120 acres, fully equipped, with 93 inches of water. \$10,500. Will take Salt Lake City home as part payment.

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160 acres, good Idaho land, 5 miles from R. R., 4-room log house, stables, sheds, first-class water right, 40 acres in meadow, bal. good alfalfa and grain land fine summer range, for quick sale, \$1900; \$900 cash, bal. easy. Ranch is worth double what I ask.

160 acres South Jordan, a bargain at \$15 per acre, easy terms.

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26,000 acres grazing land, fine for sheep, only \$3 per acre. Terms.

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For Sale or Trade—Sound 1200 lb horse, single or double driver; also purebred English Burro. Cheap for cash. Will consider cow and heifer in trade.—Henry Larson, American Fork, R. F. D. No. 1.

## FOR SALE

Foundation Stock in Holstein Fresian's and Duroc Jerseys. Will exchange a few for hay or grain. For breeding and particulars write

**JOHN W. STUBBS**

R. D. No. 2 Provo, Utah.

## FARMERS' HYMN.

For land and home and harvest,  
For strength to serve the day;  
For common peace and plenty—  
For these we farmers pray!

For children growing 'round us,  
For sunshine on the hill;  
For cloud and storm and cold and warm  
Lord God, we thank thee still!

For all the pain of loving  
Until our hearts are sore;  
For all the bliss of sacrifice  
We thank thee more and more!

For life, and all it brings us  
Of labor and reward,  
We farmers raise the song of praise,  
And this our faith we guard.

—“Almost all the advantages which man possesses above the inferior animals, arise from his power of acting in combination with his fellows, and of accomplishing by the united efforts of numbers what could not be accomplished by the detached efforts of individuals.”—John Stuart Mill.

## FANCIERS OF DUROC JERSEY HOGS MEET US AT THE STATE FAIR

Salt Lake City, Sept. 27th, to Oct. 7th, 1915

We will there exhibit the wonderful boar, **RICHARDS DEFENDER**, as well as our other great herd boars, **VIRGINIA ILLUSTRATOR**, and **KEYSTONE VOLUNTEER**, and a number of choice sows and spring pigs.

If you need a Duroc Jersey boar, sows, or young stock of either sex, wait until you see our exhibit. It will pay you to do so.

## RICHARDS LIVE STOCK COMPANY

(Successor to Richards Bros.)

99 miles North of Ogden.

Virginia, Idaho.

## AGRICULTURE LESSON XII (Continued from page fourteen)

to water containing considerable clay in suspension the water will clarify much more quickly than if no lime be added because the clay grains are brought together and thus become heavy and sink to the bottom. Lime has the power therefore of making a heavy clay soil lighter and more open. On the other hand lime added to a sandy soil which in itself has no binding or cementing power, will cause sand grains to cement together and form compound granules thus rendering it more like soil and a better medium for plant growth.

One of the most effective ways of preventing the washing of deep gulches in side hill farming, (where the farming is intense enough to warrant such an undertaking) is to terrace the farm and add above matter. Where the soil is loose and the wind strong as in many places in the middle west much damage is often done by winds blowing the soil away. In such a case the creation of wind breaks such as planting trees and also the addition of organic matter to the soil will greatly help in the preventing of erosion.

## WHOSE BUSINESS IS IT?

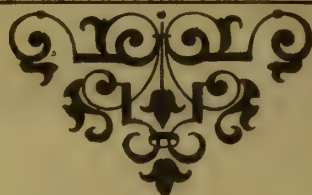
Do you ever stop to wonder whether the merchant or the banker is making money or not? Do you ever lose any sleep for fear that he is not? You presume that he is capable of managing his own affairs and if not and he fails, you have little sympathy for him. Is it not so? Why, then, should you expect him to exhibit any great concern over your affairs. You blame him because he charges too much for the merchandise he sells, or pays you too little for the produce which he buys from you. After all, is it not up to you to take a hand in the matter and dictate terms for a while? You say you can do nothing, that the merchants have things their own way, that they, being firms which do business with many people, can more easily set prices and dictate terms than can the single farmer, and this is an argument which cannot be well met, but in this statement is found the key to the situation. It is organization. It is over and over the old adage, "United we stand, divided we fall." There is no hope for a betterment of the condition of the agricultural sections of the country until there is unison in every movement and every action of the farmers. Why should you expect that the business men of the town are

to take any interest in finding a market for your produce unless you yourselves make the initiative move? Organize and show the business men that you have something to sell, and that you expect, and are ready to demand a fair price for it and you will get all that the market affords, and you won't get it until you do. You will never interest the bankers in a better Rural Credit System until you demand it in the name of the united farmers of your community, county or state. Are you suffering because of discrimination in the matter of freight rates on some commodity which you are shipping out? Then organize and in the name of your organization ask for better rates, and if it is not possible to grant it, you will at least be treated with the courtesy which a force of men always commands, and which none of you as individuals could expect. Your dealer, maybe, is indifferent to you in the matter of handling your produce, and perhaps prefers to buy in California. He pays but little attention to your protest, but if an association or those who are producing the same kind of produce approach him there is a strong likelihood that he will listen, and you will be able to come to some understanding which will be to your mutual advantage. We are not attempting to array the business men against the farmers or stir up any greater bitterness than already exists between the farmers and the business men, but the thing which is of most importance is that the farmers must organize if they expect to accomplish anything. An organization of farmers does not necessarily mean that you should build stores and mercantile establishments, any more than that you should build factories to manufacture your cotton or wool into cloth, but what it does mean is that you as a unit in a strong organization of farmers whose interests are the same as yours, will be able to accomplish many times more than you or any of your associates can do as individuals. This is your business, and no one else is so vitally interested as you are—get busy and organize, where no organization exists, and existing organizations should be pushed to greater usefulness along these lines.—Southwestern Stockman—Farmer.

—If the horses' shoulders get sore it's a sure sign of wrong treatment. The collars may not fit, the draft may come too high or too low, the trouble may lie in a chronic ulceration of the shoulders. Whatever the cause, search it out and remove it.



# Cannon Brothers Jerseys



**F**AMOUS FOR SHOW RING QUALITIES, HAVING WON SIX OUT OF SEVEN SILVER CUPS OFFERED BY THE UTAH STATE FAIR ASSOCIATION, IN THIS CLASS, IN THE PAST FOUR YEARS, BESIDES NUMEROUS OTHER PRIZES IN UTAH AND AT THE PACIFIC INTERNATIONAL DAIRY SHOW. LOOK FOR OUR DISPLAY OF CATTLE, CUPS AND RIBBONS AS YOU ENTER THE LIVE STOCK COLISEUM AT THE COMING FAIR. BUT

## Better Than Silver Cups and Blue Ribbons

is the fact that our cows are producers. Do you get that? PRODUCERS. We believe we have more cows in the Register of merit than any other herd in Utah. Ask the Agricultural College about our official records, and compare them with records made by other herds in this state or in the east. A mature cow that will make 300 pounds butter in a year is mighty profitable. Our two year old heifers have averaged 400 pounds yearly.

## Another Thing

A few years ago milk was milk, and the pale blue varieties brought about as much as any other kind. It's different now. We are putting our product on the Salt Lake market with the guarantee that it will average better than 5 per cent butter fat, and as a result are getting a much higher price than is usually paid.

## Half The Herd from \$75 to \$150

We have a few selected bulls for sale, sired by our grand champions and from excellent cows. They will make money for any dairyman by increasing the quantity and improving the quality of his output. A bull is half the herd, and the wise men will see that at least half the herd is worthy of his efforts. Then it won't be long until he has a herd of which there is cause to be proud. Call on us at the Fair or address

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Devoted to Agriculture in the Rocky Mountain Region

OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE

VOLUME XII; No. 9

LEHI AND SALT LAKE CITY, UTAH

OCTOBER 2, 1915



WE HAVE PRODUCED A WONDERFUL GRAIN CROP THIS YEAR. MORE CORN BECAUSE OF THE MANY SILOS. EACH YEAR SHOULD SHOW AN INCREASE OF PRODUCTION BECAUSE WE ARE LEARNING MORE ABOUT FARMING AND EACH YEAR WE BRING UNDER CULTIVATION MANY ACRES OF "NEW" LAND.



## Sweet Clover

COMMON IN MANY PARTS OF THE COUNTRY—GAINING IN FAVOR AS A CULTIVATED CROP.

Sweet clover, which is so common along roadsides and in waste places in many parts of the country, is rapidly gaining in favor as a cultivated crop. This is due to its value for soil improvement, for pastures, and for hay. There are three species of sweet clover commonly found in the United States. The biennial yellow-flowered species (*Melilotus officinalis*) and the biennial white-flowered species (*Melilotus alba*) are valuable over a wide area, while the annual yellow-flowered species (*Melilotus indica*) is of little economic importance except in the extreme South and Southwest, where it is grown as a winter-cover and green-manure crop. With the exceptions of a few localities, white sweet clover is grown almost entirely. This is due to the fact that it yields more forage and produces larger roots than the other species. The white-flowered species is ordinarily referred to as sweet clover, while the other two species are called yellow sweet clover.

Sweet clover resembles alfalfa when young, but can be distinguished from it by its bitter taste, its smooth shiny leaves and later, when in bloom, by the long, loose spike-like arrangement of white flowers in contrast to the close purple clusters of alfalfa flowers. One of the most notable features of sweet clover is its root system. During the first season of growth the roots often reach a diameter of one-half inch at the crown of the plant. On account of the fleshy character of the roots, a large quantity of vegetable matter is added to the soil, even when the tops of the plants are removed for hay.

### Uses of Sweet Clover.

There are few plants which will put waste land or run-down farms into condition for producing crops as quickly as sweet clover. Its value for this purpose is recognized in Alabama and Mississippi, and also in parts of Kentucky and Ohio. On account of the root development of this plant, large quantities of vegetable matter are added to the soil when a field of sweet clover is plowed. The root system alone has been estimated to be about 20 tons of green weight per acre for a good growth of sweet clover. In some parts of the country it has been used in a small way as a green-manure

crop, the second year's growth being plowed under. By turning under a crop of sweet clover, or only the stubble, marked gains are obtained in the following crop.

Sweet clover is a very good winter-cover crop in that it prevents the soils from gulying and washing. It also takes up large quantities of available fertilizers which would probably leach out of the soil during the winter. On account of the large tap-roots of sweet clover plants, potassium and phosphorus may be taken up in the sub-soil and deposited, at least in part, in the surface soil when the roots decay.

Since sweet clover is a biennial, like red clover, it is readily adapted to similar rotations. Sweet clover will undoubtedly prove to be a valuable crop as a substitute for red clover in the ordinary farm rotations where red clover will no longer grow. It may be seeded in the spring on grain as red clover is sown. When seeded in this manner some pasturage will be produced that fall in the North and pasturage or a hay crop in the South. The following season it produces two crops in the North and three crops in the South. It may be handled in a manner similar to red clover.

Sweet-clover hay is rapidly coming into favor as a feed for all classes of live stock, especially in places where more desirable types of hay will not grow successfully. Ordinarily some trouble is experienced in getting stock to eat sweet clover at first, on account of its bitter taste, but after they have been accustomed to eating it no trouble is experienced. A high percentage of digestible protein is contained in the hay.

Sweet clover makes excellent pasturage for horses, sheep, cattle, and hogs. Probably the easiest way to create an appetite for this plant is to commence pasturing stock on it very early in the spring of the second year, before other green feed has started. A sufficient number of animals should be kept in a sweet clover pasture to keep it grazed rather closely. This will prevent the stems from becoming large and woody and will also induce an abundant growth of young shoots. Stock when pastured upon sweet clover make gains which compare very favorably with those obtained from either alfalfa or red clover.

There is very little danger of bloating when stock are pastured on sweet clover, but it is safest to avoid turning the stock into sweet clover pasture when it is wet with dew or rain or when stock are unusually hungry. Sweet clover will also thrive well during midsummer droughts and produce much early and late pasturage.

### Soil Requirements.

Sweet clover has the ability to thrive on poor clay soils as well as on poor sandy soils, but it will make a better growth on fertile soil. It prefers soils of limestone origin. Clay soils which are acid should be limed before sweet clover is sown. Sweet clover is also very resistant to alkali, and plants may be found in the West growing on soils so alkaline that little else than salt grass is able to survive.

The primary requisite for obtaining a stand of sweet clover is to have

a firm, thoroughly compacted seed bed with just enough loose soil on top to enable the seed to be covered. The lack of a firm seed bed is probably the chief reason why sweet clover so often fails when seeded under cultivation. However, if it is seeded with spring-sown grain the seed bed should be rolled after seeding. Better results are usually obtained where sweet clover is seeded alone in the late winter or spring on ground which has been plowed and thoroughly worked the previous fall.

### Seeding.

The time for sowing sweet clover varies considerably in different sections of the United States. In the eastern part, in the latitude of Washington, D. C., a good stand may be obtained by seeding either early in the spring or about August 15. One disadvantage with early fall seeding is that the plants mature and die the following year and only a small growth of roots is obtained. If seeded in spring in a nurse crop sweet clover will develop an extensive root system the first year and produce a small amount of pasture. For this reason it is recommended that so far as possible it be seeded in the late winter or spring. In the Southern States, as far north as the Ohio River, the practice is to seed quite early in the spring, during February or the early part of March. In the States farther north the date is correspondingly later, until in Wisconsin it is usually seeded in the latter part of April or first of May. When the rain-

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Murray, Utah      Idaho Falls, Idaho

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fall is sufficient, a stand can be obtained by seeding in small grain, such as fall wheat or spring-sown crops like oats and barley, but in seeding with grain one runs some risk of having the sweet-clover plants killed out by drought during the summer. Owing to the rather slow germination of the seed it is usually best to seed at the rate of 15 to 20 pounds of hulled seed and 25 pounds of unhulled seed to the acre.

**Inoculation.**

On poor soils in localities where sweet clover is not common, it is quite important that the soil be inoculated at seeding time to insure good results. Even in localities where sweet clover is plentiful the early growth has been made much more vigorous by thoroughly inoculating the soil. Inoculation can be accomplished by mixing soil from a field where sweet clover, bur clover, yellow trefoil (black medic), or alfalfa grows abundantly, pound for pound, with sweet clover seed. This mixture should be sown after sunset or on a cloudy day and immediately harrowed in since daylight greatly injures the inoculating germs. Inoculation is accomplished in the South by using unhulled seed. Pure cultures of the inoculating bacteria may be obtained free of charge from the department.

**Harvesting.**

When hay is desired, sweet clover should be cut just before it begins to bloom. At this time the leaves are most abundant, and the stems have not yet become woody. Sweet-clover hay should be tedded while in the swath, and just before the leaves become dry enough to shatter, it should be raked into windrows. After lying in the windrow for a day it may be put into shocks and cured. When sweet clover is seeded in the spring with a nurse crop, only a small amount of pasture is produced that autumn, but where it is seeded alone in the spring a cutting of hay may be made in the autumn. The following year a hay crop and a seed crop, or two cuttings of hay if seed is not desired, are usually obtained. In the South, where seeded alone, two cuttings may be obtained the first year, and either two cuttings of hay and a seed crop or three cuttings of hay the second year. Where seeded alone in the North there is no danger of the hay becoming woody the first year, and for that reason it does not need to be cut until it has attained its largest growth in the fall.

**Seed Production.**

In harvesting the seed it is important that the plants be cut before the seed is fully matured. One must watch the seed crop carefully, and as soon as the lower racemes or spike-like arrangements of flowers are dry and mature it is best to cut the crop. Even where it is mown and the seed flailed out, probably not more than three-fourths of the racemes should be allowed to become fully mature. Sweet clover seed can be thrashed most easily by the ordinary thrashing machine, but if it is to be hulled a regular clover huller with special rasps is used. In semi-arid and irrigated sections the hulls are so dry that an ordinary grain thrasher will remove most of them. Since the seed shatters very easily, sweet clover should be cut when it is wet with dew. If the first growth be cut for hay when it is 2½ feet tall, leaving a 6-inch stubble, the seed crop will come on much more evenly. Care

should be taken to cut the stubble of the preceding hay crops as high as possible, so that there will be sufficient stems remaining to resume growth, as this plant, unlike alfalfa, does not form new crown shoots. Seed yields vary from 2 to 8 bushels to the acre.

**Eradication.**

The failure of the farmers throughout the United States to make use of this valuable legume has largely been on account of the fear that it could not be eradicated from their farms if once started. The biennial nature of the plant makes the problem of eradication very easy. It will not persist when continually mowed so that it can not produce seed, nor is it troublesome in clean cultivated or inter-tilled crops.

**PASTEURIZING MILK AT LOW TEMPERATURES.**

In order to determine the best way of pasteurizing milk so as to kill the disease germs and yet not give the milk a cooked flavor or lessen its nutritive value, the Department of Agriculture, through its Dairy Division, has been conducting a series of experiments, treating milk at different temperatures and for different length of time. According to the report on these experiments in Bulletin 166 of the Bureau of Animal Industry, when milk is pasteurized at 145 degrees F. for 30 minutes the chemical changes are so slight that it is unlikely that the protein (muscle building element) or the phosphates of lime and magnesia are rendered less digestible than they are in raw milk.

Moreover, from a bacteriological standpoint, pasteurizing at low temperatures is found to be more satisfactory than pasteurizing at high temperatures. According to Bulletins 126 and 161, where low temperatures are used the majority of bacteria that survive are lactic acid organisms which play an important part in the normal souring of milk. When milk is efficiently pasteurized at high temperatures, the bacteria which survive are largely of the putrefactive kinds, and milk so treated if kept for any length of time has a tendency to rot instead of sour. From the standpoint of economy, the technologist of the Dairy Division finds that pasteurizing at low temperatures calls for less heat. It is found that it takes about 23½ per cent less heat to raise milk to the temperature of 145 degrees F. than to a temperature of 165 degrees F. A similar gain is a saving of the ice needed, because it will require 23½ per cent more refrigeration to cool milk to the shipping point when it is pasteurized at the higher temperature. The department, therefore, recommends that "When market milk is pasteurized it should be heated to about 145 degrees F. and held at that temperature for 30 minutes."

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Tickets on sale Nephi, Tintic District, and points East, September 27th to October 6th inc. Returning October 12th. All other points, on sale September 26th, to October 5th inc. Good returning until October 15th. Ask for tickets via Salt Lake Route.



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LOWEST PRICES

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SALT LAKE CITY, UTAH.



# Kind of Milk For Cheese Making

Ben R. Eldredge.

A first-class article of cheese can only be produced from a first-class article of milk; that means, that the milk should be clean. Clean milk cannot be produced from dirty cows nor dirty yards nor in atmosphere that is loaded with taints. Milk that is clean becomes foul when placed in unclean containers. A container may shine and yet contain crevices or corners that may be loaded with stale accumulation of milk or foreign matter. Cows may be clean and surroundings in splendid condition and the atmosphere pure but a milker of careless habits and dirty clothing may even then contaminate the milk over which he is working. The production of clean milk is not the result of any one particular feature of equipment or any one particular characteristic of method. It is a conscientious adherence to a multitude of details of cleanliness.

In a recent visit to the cheese factory at St. George I found the product of the factory to be highclass. I purchased a number of ten-pound cheeses and took them to Salt Lake City, where samples were submitted for the judgment of experts and the quality pronounced excellent. I do not think, in the Salt Lake market, a better sample of cheese could have been found than the St. George cheese made August 5th and sampled in the office of the Western Dairy Division September 7th. This is particularly gratifying when you take into consideration the heat of the month of August and the conditions under which that cheese was produced. It speaks well for the community in which the milk was gathered that went into the factory and it speaks equally well for the methods that were followed in the factory.

We must not, however, be satisfied with only doing as well as we have done; for what has been done is only a beginning. It is necessary for the factory at St. George to make for quality; it is necessary for the people to sustain the factory in putting into it only a quality of milk that will

make a first-class article of cheese. It is necessary that persistent effort be put into every detail that is a factor in cheese production at the local factory.

I want to outline just a few things that will help to maintain this quality. Cows must be healthy and clean, kept in clean places, given plenty of clean water and good, clean feed. (By "clean feed" I mean feeds that are free from mould, excessive dust or any unsanitary condition.) Feeds that in themselves carry strong taints should not be used in such a way that feed taints enter into the milk. Rye pastures sometimes produces a feed taint that is difficult to overcome in making cheese. In the winter time the feeding of turnips produces a bad taint. This, however, can be remedied if the turnips or other roots are fed immediately after milking and not in large quantities. If this precaution is observed, taints will pass through the cow's system before time for the following milking. It seems hardly necessary to add a further precaution in regard to health of cattle but above all things cattle for the production of milk that is to be used in any form as human food should be in perfect health. Every utensil with which the milk comes in contact should be perfectly clean; that is cleaned in such a way that every crevice, every corner, has been reached with a good, clean brush with water containing a reliable cleaning compound; then the utensil thoroughly rinsed and scalded with boiling water or live steam. Don't wipe after the scalding but set to drain and the heat from the scalding will soon dry the article better than any wiping cloth. Good strong sunlight should be used as a sweetener but utensils should not be placed where they will gather dust.

"There is no way on earth of taking dirt out of the milk equal to keeping 'it out.'" Remember this and there will not be much that is disgusting left in the strainer. In fact, perfect milk production would lead to the discard of the strainer altogether, but we are not perfect and for a time we will have to use this time-honored evidence of our carelessness. The straining, however, should be done immediately after milking and then the milk placed in the coldest place available. By this, however, I do not mean it should be frozen—freezing is not likely to happen in St. George. Forty degrees is ideal for milk but forty degrees in St. George—well, we don't have it, that's all. Now don't mix warm milk with cold milk; for when that is done, we undo in the cold milk all that is done by getting it cold. Right in here perhaps should come an explanation along bacteriological lines but there is not time for it. I would simply say don't mix warm milk or warm and cold cream. When necessary to mix two lots get them both cold before mixing.

Don't think sour milk is "good enough for the cheese factory." If you send sour milk to the cheesemaker and he does his duty such milk will promptly be returned to you—and

don't blame him when this happens. The fault is yours.

Everybody in St. George support the cheese factory. Produce good clean milk and eat lots of good cheese.

To the patrons of St. George Cheese Factory—If you wish to have your cheese gain a reputation for quality which will bring the highest market prices, deliver to the factory clean sweet milk; for without it the cheese maker is powerless to manufacture the highest quality of cheese.

## HOW TO PREVENT

### MOULD IN BUTTER.

The important losses in butter through the growth of mold upon the tub lining, wrapper, or in the butter itself, which injures the salability of the product, have led the U. S. Department of Agriculture to investigate this subject. Mold in butter is usually found in three forms. (1) Orange-yellow areas with some growth of mycelium under the surface. (2) Smudge or dirty green areas, either entirely inside the butter or with some surface growth. (3) Green-surface colonies, either upon the butter, causing decomposition, or upon the container or wrappings which will injure the appearance of the butter.

Experiments in producing molds artificially in samples of butter indicate that a growth of mold in or about butter is favored to excessive curd, by "leaky" butter or by wet surfaces, wet wrappings or highly moist air. If butter molds readily it is an indication of insufficient salting, as salt up to 2.5 to 3 per cent is sufficient to prevent mold or reduce it to a negligible amount. The growth of molds, moreover, is largely reduced by keeping the butter at low temperatures. Improper storage temperatures, accompanied as they frequently are with moist conditions, are favorable to mold in butter. Unsalted butter is more subject to deterioration from microorganisms than salted butter. Successful storage of such butter is therefore dependent upon scrupulously clean, dry refrigeration. Cellars and ice refrigeration rarely furnish conditions which will prevent mold in unsalted or slightly salted butter, although it may be delayed or reduced. Butter properly made and normally salted (up to 2.1 to 3 per cent, equivalent to the use of a 12 to 15 per cent brine) will not show mold under reasonably careful handling.

Investigators in summarizing their results emphasize the fact that well-washed butter is less subject to mold than that with an excess of curd, but the essential factor in molding seems to be, water, not protein.

"Leaky" butter from which milky water exudes and collects in the wrapper or container furnishes the best conditions for the beginning of mold growth. From these wet areas colonies may spread to the butter itself.

Mold, the investigators find, will not grow upon the surface of a piece of butter exposed to air at ordinary humidities. The water in the butter is not sufficiently available to the mold to support the development of a colony unless evaporation is reduced by a high moisture content of the surrounding air. In closed packages, wet or damp cellars, or carelessly packed masses with cracks or fissures in which moisture collects, mold may seriously injure the appearance of the packages or actually induce great changes in the butter itself.

Green molds may damage normally

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salted butter if cracks and open spaces are left by bad packing. Other investigators have found that paraffining the tubs or boxes prevents mold on the container and the liner by preventing the escape of water which would leave the air space necessary for mold growth.

Very moderate salting prevents the appearance of the orange-yellow patches and the smudges. The green molds affect normally salted butter only when it is held under conditions of temperature or moisture that are favorable to mold growth.

#### DIFFICULT CHURNING.

G. A. Gilbert, Colorado A. C.

In the fall and early winter conditions often arise which make the churning of cream on the farm a difficult matter. At this time of year, cows are usually well along in their period of lactation and are upon dry feed. The effect of both these conditions is to make the fat in the cream harder and smaller globules. Butterfat is a mixture of many kinds of fat, each having a different melting point. When the cow is fresh and upon the pasture or other succulent food the fat in the milk consists of a large proportion of the soft fats, which unite easily into butter upon agitation in the churn.

Practically all cases of difficult churning can be readily overcome by methods of handling. Ripening the cream to a higher degree of acidity and churning at a little higher temperature will overcome the most of these cases. Cream at this time of the year is often allowed to sour at too low a temperature and is kept too long before churning. It should be ripened at a temperature of about seventy degrees, and when it has developed a clean, sharp, acid taste it should be churned. A thermometer is almost a necessity in getting cream ready for churning. The temperature at which to churn cream will vary with conditions, but for this time of the year it should probably not be below sixty degrees.

When thick cream is put into a churn at a low temperature the agitation may cause it to incorporate bubbles of air which make the cream swell and froth and behave as though it were beaten. It cannot be churned in this condition, but must be warmed gradually several degrees and then the churning started again. This can be accomplished by a little luke warm water added directly to the cream or by warming the cream from the outside. Too much water should not be added or difficulty in churning will result from the thinness of the cream.

Sometimes, when the churning temperature is low, no frothing will result, but the formation of butter seems to stop just short of the breaking point. The difficulty is overcome by slightly warming the cream or by adding a little dry salt. The salt affects the viscosity so as to facilitate the union of the fat globules.

#### COST OF SILO FILLING

No definite cost can be given for silo filling as it depends on many variable factors, such as the distance from field to silo; weather conditions, it being more expensive during wet weather than clear weather; the efficiency of the machinery and of the men. The cost has been estimated as low as 40 cents, and as high as \$1 per ton. Seventy-five cents would probably be a fair average.

#### GARGET OR MAMMITIS

##### Prevention and Treatment.

Prevention: Sanitation is one of the chief methods of preventing the spread of garget among dairy cows. All litter and yards should be maintained in a clean condition and disinfected periodically. The hands of the milker and also the udders of the cows should be carefully washed in an antiseptic solution before and after milking each diseased cow. It is also wise to avoid careless handling of the cows so that they are not injured. Healthy, vigorous, well-fed and carefully managed animals will often pass through infected herds without contracting the disease.

Milk from cows infected with garget should never be used for human consumption. Care should be exercised to collect this milk in a separate pail and destroy it so as to make it impossible for the germs to spread. It is always bad practice to milk the affected quarter on the floor or the ground, and where this is done, any bedding or substances contaminated by the diseased milk should be carefully disinfected. For this purpose a solution of carbolic acid, creolin or any other commercial antiseptic should be used. Care should be taken to separate all cows that are suffering with garget from the rest of the herd, and these should be milked after the general herd, says Dr. R. H. Williams.

The factors causing special susceptibility to mammitis may be given as follows:

1. Extreme injuries such as blows, kicks, bruises, violence, etc., may cause local or general inflammation.
2. Careless milking; allowing the accumulation of milk in the udder or where the milk drops constantly from the teat, thus allowing passage for the germs from the litter and other substances through the open teat.
3. Animals too fat.
4. Over-stocking.
5. Driving with distended udders.
6. Exposures, such as lying on the cold ground, especially after freshening and during severe weather.
9. Impaired condition of the animal.

Treatment: Ordinarily the animal will overcome the disease in five to eight days on its own accord if given good sanitary attention. After this time the symptoms will gradually disappear but the yield of the milk will drop below normal. On this account, certain of the best stockmen in the State recommended nothing in the way of treatment. However, either form of garget will usually respond favorably to prompt action in the early stages. The animal should be given a purgative of about one and one-half pounds of Epsom salts when first noticed. Grain in the ration should be reduced to one-third the normal amount, and a succulent easily digested food given the cow. Hot fomentations, may be applied or camphorated oil or soap liniment with a little turpentine or ammonia may be rubbed gently on the affected parts. The udder should be bathed with hot water for at least 20 minutes three times a day, and, after drying, rubbed thoroughly with some warm olive oil containing 3 per cent of gummed camphor. Poultices made of bran, linseed meal, oat meal or other substances that can be placed close to the udder and that will retain their heat a considerable length of time, should be applied. The cow should

be milked carefully three times a day, oftener if possible. Where this can be done by hand, it is better than using the teat siphon. If an abscess forms, it is important that the puss be withdrawn. Some recommend bleeding the jugular in cases where the fever is high, but this is a risky operation.

#### HOGGING DOWN ALFALFA.

There is a tendency, to feed more and more of the farm crops and to sell live stock products. Pasturing hogs on alfalfa and hogging corn are coming very much into favor. The results of experiments conducted on the government farms indicate that this is a decidedly profitable way of marketing alfalfa and corn. The small amount of labor involved is an important factor, and another consideration is the fact that less fertility is removed from the soil than when the crops themselves are sold.

In one experiment, hogs were kept on alfalfa pasture at the rate of 1815 pounds of live weight to the acre and given in addition a ration of 2 pounds of shelled corn for each 100 pounds of live weight. They were kept on the alfalfa 121 days, gaining in the course of this time 457.5 pounds. They were sold for 7 cents a pound, corn costing at the same place \$1.70 per 100 pounds. Taking these prices as a basis the net return per acre from the hogs was \$41.44. At the average yield of alfalfa hay per acre this means that the hogs paid \$11.23 per ton for

the alfalfa they consumed. The local market price of alfalfa hay was only \$4.50 per ton.

The experiment was continued by turning 4 hogs from the alfalfa on September 22 into corn and leaving them there until all the corn was consumed. This required 20 days, during which period the hogs made a total gain of 145.5 pounds. At 7 cents a pound this worked out as \$40.72 per acre for the corn or \$1.17 per bushel.

#### ABE MARTIN ON ADVERTISING

By Kin Hubbard

How long would a woman be a social leader if she forgot t' call up some newspaper ever' day?

A feller kin git a purty big can o' baked beans fer a dime, no matter how much it costs t' advertise 'em.

Even th' purtiest girl in town would die an ole maid if she didn't git out an' do a little adbertisin'.

"What's become o' th' ole time merchant that used t' set a tubful o' dried apples an' a keg o' mackerel in front o' his store an' then go t' sleep?" "Ever' feller that don't advertise hain't a fool, but' very few fools advertise.

"The feller that don't know how t' advertise is about as bad as th' feller that don't believe in it.

"Folks are allus anxious t' see some-buddy they've read so much about, an' they'd be jist as crazy t' se a clothes wringer er anything else under the same circumstances."







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Utah Horticultural Society, Utah State Dairymen's Association, Utah State Bee Keepers' Association, Bear River Valley Farmers' Protective and Commercial Association, Agricultural College Extension Department and Utah State Fair Association, Utah-Idaho Millers' and Grain Dealers' Association.

When you ask for a change of address always give OLD and new postoffice address.

Hog raising—why don't we do more of it.

Look over the advertisements in this issue of the Farmer.

Canned corn is good for live stock, with a silo is how they do it.

Why is it that men who build a silo, usually want more of them.

How about the roads. The fall and winter weather will soon be here and we should have our roads in good repair.

Success comes only to those who work and keep working. The only way to do is roll up your sleeves and keep at it.

Put away a few good apples for the winter. The children will enjoy them. If given a little care in packing and in a good cellar some varieties of apples will keep for several months.

What have you done about putting away your farm machinery. A little paint and grease can be profitably used at this time on the implements. Put them away now before the wet weather sets in.

Fall plowing pays, especially on the dry farms. Push the work now,

leave the land in the rough and let the frost help you farm during the winter. Avoid great rushing and overworking in the spring by doing everything that can be done before freezing weather this fall.

Every farmer needs a course in entomology—i. e. in the study of the pests, especially, which attack his farm crops. In order to be able to fight pests successfully the habits and life history of the intruders must be thoroughly understood. And upon this subject farmers generally are very much in the dark. Let us have more light. Get help from your local high school or through a correspondence course from the Agricultural College.

Straighten up the straw-stacks it saves hay and makes money. Round them up snug so that the fall rains will not penetrate them. Our western straw, especially the dry-farm straw, or that raised with young lucern under irrigation contains a great deal of nutriment. Horses, cows and even sheep will winter on it in good shape, especially if they have plenty of good water and shelter.

#### FEED YOUR ALFALFA.

A farmer the other day was discussing how he could haul several tons of alfalfa to a market only a few miles away. It had never occurred to him that he could feed it to livestock. Driving them to his stacks and leaving the manure on the land. The best way to market your alfalfa is to feed it.

#### A LITTLE PAINT.

The importance of a little paint around our home and barn yard is not understood by all farmers. Right now is the time to do some painting.

A little paint will go a long way. It will brighten things up and make them look ever so much better. At the same time the paint preserves and waterproofs the surface it covers. Money spent for paint is well invested.

#### WHO DOES YOUR THINKING?

There has been only a very few thinkers, all through the history of the world. Thinking is one of the things that sets man above the rest of the animal kingdom. There is a great many people in this world who let some one else do the thinking for them. Who does your thinking? The thinking man is the progressive one, while those who allow others to think for them live in a rut, they are followers rather than leaders. It is no easy matter to acquire the habit of thinking. It means work, so that you can see and hear, the cultivating of an open mind. The thinking man reasons out if "this and that" is so and why. It will be a hard matter

for you to be successful if the other fellow does your thinking.

#### MEASURE OF FARM PROFITS

Farm survey work has resulted in finding the most practical way of figuring farm profits. The term which is used to express the profitableness of a farm business is called "labor income." This is the amount left after the expenses and 5 per cent interest on the investment are subtracted from the farm receipts. That is, it is what the farmer received for his labor and management. In addition to the labor income he had a home and what the farm furnished toward his living.

#### START WITH PURE BREDS.

If you are going to raise cattle of any kind start with pure bred. If you cannot afford to buy many have at least a start and raise your stock on the farm. It costs no more to feed and care for pure bred than the mongrels. They always bring a better price and in the great majority of cases produce more. Once you have a start it is only a matter of time until you will be able to increase your numbers and can emphasize the breeding of cattle. This is true whether you want beef or dairy cows, horses, hogs or any kind of farm animal. The man or boy who has pure bred always seems to take more interest in them, he makes a greater study of their needs both as to feeds and proper care.

#### SEED POTATOES.

If you did not mark your hill selected potato seed, it is a good time to select the seed when digging. When certain kind of potato diggers are used this will not be practical. When plowed you can usually tell the potatoes that come from the best hills.

Save tubers from strong vigorous growing plants from hills that are productive. Like produces like. If the tubers from unproductive or weak plants are used for next year's seed, a similar harvest will be reaped. More attention to the selection of seed tubers will do much toward increasing the quantity and quality of the potato crop next year.

#### SOME OF THE COSTS

##### IN FARMING

When you consider the total expense of operating a farm it is usually larger than figured. Certain expenses are not always considered. These omitted, as a general rule are those for which cash is not paid. Items that might come under this cost of farming are, the depreciation in value of buildings even through well built and kept in good condition. Machinery has an annual depreciation of about 10 per cent each year. Un-

paid family labor is not often thought of as an expense, however, if a boy or girl is away for a season some one must be hired to take their place and this help is paid cash or its equivalent. Other items might be mentioned but this is enough to start you to thinking, so that when you make up your yearly report you will give some of these things consideration in the cost of farming.

#### FILLING THE SILO.

For a number of our readers the filling of the silo will be new this year. Those who have had experience will know that the proper filling of the silo is of great importance, to secure the best silage, no matter how good a silo you may have. The corn should be harvested at the right time, cut into pieces of a half to three quarters of an inch long, evenly distributed and well packed in the silo during the filling or you will have more or less unsatisfactory results. Allow the corn to mature don't get in too big a hurry, and if a frost should come before it is cut, add plenty of water when filling. You can not cut silage too small or pack it in the silo too hard. Be careful in filling your silo and do it right. Do not blame the make or kind of silo if you have failed to properly fill it.

#### STUDYING FARM CONDITION

We are giving in this issue another report of a farm survey. It should be carefully studied by every farmer. Analyze it and compare your farm with the figures.

The labor income is the difference between the farm income and the interest on the farm investment. It is what the farmer has left for his own labor after paying all other expenses including interest.

The interest paid is on the amount the farmer has invested in his farming business, including land, machinery, livestock, etc. Many farmers do not succeed because, of the haphazard choice of farm crops and cropping and their marketing systems. The amount of livestock, the crop rotations as best suited to your land all influence the labor income at the end of the year.

The price of land should influence you in selecting your crops. The type of farming must be in keeping with the local conditions. The products to be raised must be such as can be disposed of advantageously, that is, there must be a demand for them, the marketing facilities must be favorable, and the cost of transportation such as to leave a fair margin of profit.

In any locality a study of the types of farming shows that those that are most generally successful are those that are best adapted to the local conditions.



## Our Ambition

To produce a perfect sugar was our ambition. Our ambition resulted in the discovery of vast improvements in sugar refining. We would be satisfied with nothing less than perfection.

If you have striven for perfection you know what it means. We put our very souls in this work; details were given the utmost attention.

Order a sack of Utah-Idaho Sugar from your grocer, and see what you think of it. Just say—



## Fifty-Nine Farms of Hinckley, Millard County

Here is the results of a farm survey made at Hinckley, Millard County. The figures are well worth studying. Compare the average of 59 farms with the ten best and see wherein they differ. Why does one farmer make more money than the other? The expense of producing certain kinds of crops are much less when compared with others and why.

Look over the expenses and see how they compare with your cost of farming. It is not always the large amount produced that makes the best income. What you want to show at the end of the year is a profit. If there is anything about these farm surveys you don't understand let us know. Ask us questions about them.

	Averages of 10 better paying Farms	Averages of all 59 Farms
<b>Size of Business</b>		
Total Capital.....	\$11,828	\$ 9,650
Total Acres.....	163	153
Total Crop acres.....	78	52
Total No. of Acres in Alfalfa.....	56.4	34.0
Total No. bu. Alfalfa Seed.....	138.1	49.3
Total No. Milch Cows.....	6.1	4.7
Total No. Work Horses.....	3.8	3.5
*Total Productive Animal Units.....	17.9	13.3
<b>Quality of Business</b>		
Milk Receipts per cow.....	\$ 4.74	\$ 23.58
**Cattle Receipts per head.....	\$ 27.73	\$ 25.95
*Net Live Stock Receipts per r. A. U.....	\$ 42.89	\$ 40.11
Net Live Stock Receipts per \$100 feed fed.....	\$161.14	\$130.09
Crop Receipts per Crop Acre.....	\$ 20.81	\$ 12.79
Receipts from Alfalfa Seed per acre.....	\$ 43.54	\$ 35.94
<b>Crop Yields Per Acre</b>		
Potatoes.....	55 bu.	49 bu.
Spring Wheat.....	10 bu.	6 bu.
Fall Wheat.....	11 bu.	23 bu.
Oats.....	20 bu.	16 bu.
Rye.....	0 bu.	13 bu.
Alfalfa.....	2.2 tons	2.2 tons
Alfalfa Chaff.....	.7 tons	.8 tons
Productive Animal Units per man.....	14.1	11.3
Crop Acres per man.....	61.0	44.6
Crop Acres per horse.....	20.2	14.9
<b>Diversity of Business</b>		
No. Sources Income.....	6.3	5.2
No. Crops Grown.....	4.3	4
No. Sources Income Over 10 per cent Gross Receipts.....	3	3
<b>Sources of Income over 10 per cent gross receipts</b>		
Cattle.....	\$ 329	\$ 186
Hay.....	\$ 531	\$ 244
Alfalfa Seed.....	\$ 1019	\$ 340
Labor Income.....	\$1,758	\$ 613

\*Does not include work horses. One animal unit is one cow, bull, steer, or two young cattle, one horse, two colts, seven sheep, fourteen lambs, five hogs, ten pigs or one hundred poultry, figured on the basis that each animal unit requires the same amount of feed as determined by investigations.

\*\*Does not include milch cows.

### RECORD OF A YEAR'S BUSINESS On Ten Better Paying Millard Co. Farms.

AVERAGE	Value	Number	CAPITAL
	\$ 9,175	163	Total Acres
	372	6	Cows
	427	12	Other Cattle
	632	6	Horses and Colts
	11	2	Sheep
	112	3	Hogs
	22	43	Poultry
	660		Machinery
	268		Feed and Supplies
	149		Cash
\$11,828			Total Capital
	\$ 1,019		RECEIPTS
	5		Alfalfa Seed
	57		Potatoes
	6		Wheat
	0		Oats
	0		Barley
	531		Straw
			Alfalfa and other Hay
	2		Fruit and Vegetables
	151		Milk and butter
	329		Cattle
	88		Horses*
	3		Sheep* and wool
	154		Swine*
	43		Poultry* and Eggs
	0		Breeding Fees.
	273		Miscellaneous
	177		Increase in Feed Inventory
\$2,838			Total Receipts

\$157	EXPENSES (Cash)
12	Hired Labor**
14	Machinery
20	Buildings
36	Fences
18	Feed
2	Breeding Fees
8	Veterinary
	Seeds

32	Thrashing and Twine
8	Machine Work
64	Taxes
10	Water Tax
25	Miscellaneous
83	(Not Cash)
0	Family Labor***
	Decrease in Feed Inventory
\$ 489	Total Expenses
\$ 2,349	Total Farm Income
	(Receipts minus expenses)
\$ 591	Income From Capital
	(5 per cent interest on Capital)
\$ 1,758	Labor Income

\*The receipts from stock are found by subtracting the sum of the purchases and what is on hand at the beginning of the year from the sum of the sales and that on hand at the close of the year.

\*\*Includes cash expense of boarding hired labor.

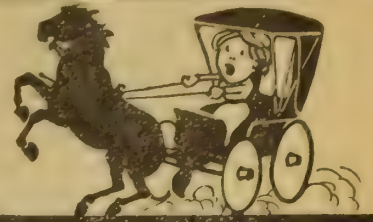
\*\*\*Except that of the operator of the farm.

LABOR INCOME is what the farmer receives for his year's work. It is obtained by subtracting from the Gross Farm Receipts, the sum of the Total Farm Expenses and 5 per cent. interest on the capital invested in the business.

Besides his LABOR INCOME the farmer gets all that the farm produces toward the family living, i. e.—House to live in, milk, butter, meat, eggs, vegetables, fruits, etc. etc.

"This advertisement for a prepared food says that if a man eats less meat his back will stop hurting." "Of course it will." "I should like to know why." Because he won't have to work so hard to earn a living."—Houston Post.

**EAR PERFECT TAGS**  
Samples Free  
ATTACHED INSTANTANEOUSLY  
Name and Address. Numbered if Desired.  
LEG BANDS for Poultry, Pigeons, Turkeys  
SALT LAKE STAMP CO. Salt Lake, Utah.



### YOUR HARNESS OR YOUR LIFE! Make your harness safe by using **EUREKA HARNESS OIL**

It strengthens and livens the leather. It is harness insurance. It adds new life to old harness. It keeps new harness new.

Dealers everywhere  
**THE CONTINENTAL OIL CO.**  
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## Short Horn and Herefords

If you want one or a carload, phone, telegraph or write at once

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**Ogden, Utah**

### ANSWER

The advertisements in this issue either by asking your local dealer for them, if he does not carry them in stock he may send for them, or you can write direct for catalogue and information. Don't forget to mention the Utah Farmer for we are back of every advertisement that appears in our paper.



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GOING TO BUILD? Then you need this profusely illustrated, 32 page book. It contains many beautiful illustrations showing the use of brick in the construction of attractive, inexpensive homes. In fact it tells the story of

## BRICK and Their Use

so clearly and convincingly we are certain you will be only too glad to build with brick—no matter whether it be a cottage, bungalow, a mansion, a factory or a public building.

Brick is the material that has stood the test of centuries—that is time-proof, fire-proof, heat and cold proof, vermin-proof and at the same time highly artistic. Better send for a copy today—FREE for the asking—without obligating you in any way. A postal will do, or phone to Wasatch 951 and it will be sent to your address.

**Salt Lake Pressed Brick Co.**  
KEARNS BLDG. SALT LAKE CITY, UTAH  
Dept. U

Enclose this ad. with your request



# Value of Good Seeds

By L. D. Sweet.

That the use of good seed is absolutely essential to good crops, and that on amount of good care or good handling of the crop will produce good results if poor seed is used, are truths that have been largely overlooked in the past but are now becoming generally recognized and accepted. That good seed is also really cheaper than poor seed is not as yet so generally admitted, but is also absolutely true.

Poor seed is cheaper in its first cost, but is very expensive because it not only produces a poor crop, but it also usually contains quite a large proportion of weed seed, which also germinates and is expensive to get rid of.

There is an old saying that "Like begets like," which is just as true of the seed that is planted in the ground as it is of the cattle that are bred. Every farmer knows that in breeding livestock the greatest care must be exercised in the selection of the animals to be bred, and that by consistently following the practice of breeding only from the best, and discarding the poor animals, the herd is gradually built up until it consists only of first class animals. The value of such animals much exceeds that of the ordinary kind, but the cost of keeping the best animal is no greater than that of keeping the poorer, unprofitable kind.

Practically the same principal applies in the use of seed, and farmers should be just as careful in their selection of the seed from which they hope to harvest a bountiful crop. If he uses a poor quality of seed, he must expect a crop that is anything but bountiful and probably very poor in quality; but—it will cost just as much to produce the poor crop, that is to plant, cultivate and harvest, as it will to produce the bountiful crop from good seed.

Poor seed may cost perhaps half as much as good seed, but usually it is largely adulterated, and of that which is true to name frequently not more than 50 per cent will germinate, with the result that not more than from one-quarter to one-third of the seed used will grow. This means that if the grower wishes to get an ordinarily good stand he must use from two to four times as much as he would of the good seed, and in addition will have to contend with a heavy growth of weeds which will grow with the crop plants, robbing them of the needed moisture and nourishment, and consequently impairing the results, unless they are promptly removed by much extra

labor. The poor seed also usually produces quite a large proportion of weak plants, most of which die from lack of vitality or, if they come to maturity, usually produce little if anything in the way of a crop.

On the other hand, good seed, properly planted in good ground, and the crop properly cared for, will cost no more to mature than the poor seed, and, under ordinary conditions, the result will be good crops of fine quality which will usually command good prices.

Good seed should be strong or able to produce good vigorous plants; it should be free from disease, true-to-type or variety, and free from impurities or adulterations. In the purchase of seed, care should be taken to see that it is the best obtainable of the variety wanted; that it has been carefully cleaned to take out all the lighter grains as well as the weed seeds, as far as possible, and then it should be carefully tested for germination. Good seed should show a germination of from 90 to 95 per cent of strong sprouts, and such seed when properly planted in moderate quantity will produce a more profitable crop than several times the quantity of poor seed, as it will be both larger in quantity and finer in quality. A good plan is to get samples of the seed you contemplate buying and test them for germination and purity before purchasing.

It should be borne in mind always that no matter how well and carefully a crop is handled after the seed is planted, unless good seed has been used the resulting harvest is not likely to be a very successful or profitable one.

## SELECTION OF SEED CORN

J. C. Hackleman.

Always select seed corn in the field before frosts and freezes injure it. Scoop-shovel selection, or even more careful crib picking next spring, will be especially fatal if frost injures the corn this fall.

When the harvest is on and you begin to gather the crop, you can not tell which ears matured early and would be likely to produce an early crop that will avoid frost next year. You are too busy to study seed ears, anyhow, when trying to put as many bushels as possible into the crib each day.

Only in the field is it possible to know whether an ear is large because it was produced on the only stalk in the hill and so had more than its share of sunshine and plant food. Careful experiment station tests have shown that the ears which are good in spite of having been grown on poor soil and in a somewhat crowded stand are more productive than those on highly fertile fields or in thin stands.

Only in the field can you tell whether the ear was too high or too low on the stalk and whether it stood so erect that the fall rains would enter the husks and spoil the ear. Ears that stand almost erect will be materially injured in case of a prolonged rainy fall even though no frosts or freezes should come before the corn is harvested. If the corn should be frozen before harvesting and when it is still wet from a cold rain, it is not unrea-

sonable to think some of it would be killed. Ears that have a longer shank and point down are much better.

Ear height is important not only because the lower ears are more convenient to harvest, but also because prolonged experiments have proven that low ears are generally earlier in maturing than the high ears. Therefore, select the ears that appear on the stalk from three to four feet high and unconsciously, but surely, the ear height and maturity of your corn will be influenced.

## SUCKERING IN CORN

Every wet season, there is more or less inquiry as to the cause of suckering, or tillering in corn.

The cause of this habit of corn is often argued with great vigor both pro and con. Corn is naturally a branching plant. Some strains or varieties of corn have the tendency more strongly developed than others. This can readily be seen by observing the difference between the habit of pop corn and the dent corns in the field even grown under the same soil and climatic conditions. Dent corn has the suckering habit less well developed than pop corn.

There is also a considerable difference in different varieties of dents.

Many conditions of environment tend to favor or retard the production of suckers. With dry weather early there is almost no suckering; with moist weather early in the season, which is favorable to vegetative growth, suckering is apt to be rather heavy. Surface planted corn will sucker more abundantly than listed corn. There are two reasons for this: first, the surface planted corn makes its early growth more rapidly and vigorously than is the case with the listed corn; second, filling up the listed furrows often covers up the suckers so that they are killed before they get a chance to develop.

The stand has a great deal to do with the amount of suckers. Where the stand is thick, suckering is low; where the stand is thin, suckering is high, providing weather conditions are favorable.

Experiments have been made in removing suckers. These suckers have never shown any advantage for the practice. The cost of removal considered, a disadvantage has usually resulted.—Alvin Kezer, Colorado Agricultural College, Fort Collins, Colorado.

## RYE VARIETIES

Emery Valley, Garfield, Utah.

I am enclosing two heads of dry land rye raised in Emery Valley, which lays 56 miles South East of Marysvale at an altitude of 7000 feet. Please tell me what kind of rye it is. Is there two kinds—brown and white heads;

Please tell me what is the best kind of dry land wheat out side of Turkey Red for a 7000 ft. altitude?

I am Respectfully,

W. ALBERT HALLADAY.

Answered by F. S. Harris.

Rye varieties are not named and do not remain distinct, since they cross so readily. The two heads of rye which you sent, while somewhat different in appearance, would cross readily if grown together and would not retain their present characters. They are simply types of common rye. Marquis wheat has proved to be a



## Farm With a Tractor and Finish on Time

Probably the strongest reason why Tractor Farming is being adopted so fast is because a tractor gives you the power to do your work at just the right time. It gives you a lot of power—power in concentrated form—power that one man can handle—power that hot weather can't stop—and power that will work as long hours as you want to run it.

## More Acres Are Plowed by Avery Tractors Than Any Other Make

They have low speed, strong opposed motors; special sliding frame transmissions; two speed gears. Strongly guaranteed. Built by an established company with a large factory and many branch houses, which insure permanent service.

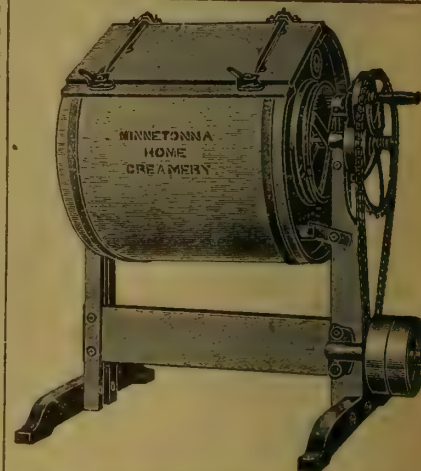
Avery Tractors are built in sizes to fit any size farm. They sell at cash prices as follows: 1 Plow Tractor \$195, 2 Plow Tractor \$550, 3 Plow Tractor \$760, 4 Plow Tractor \$1120, 5 Plow Tractor \$1680, 6 Plow Tractor \$2145, 8-10 Plow Tractor \$2475. The complete Avery Catalog will tell you all about them. Also about Avery "Self-Lift" Plows and "Yellow-Fellow" Thrashers. Write now for complete free catalog or call on any Avery agent, branch house or jobber. Address

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**EVERY** One Man Outfits  
7 Sizes—Fit Any Farm

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Jobbers for the  
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Salt Lake City, Utah.



**MINNETONNA**  
TRADE MARK, REG. U.S. PAT. OFF.  
**HOME**  
**CREAMERY**

See this churn at the  
**Strevell-Paterson**  
**Hardware Co.**  
State Agent  
Salt Lake City, Utah.

After a young man rings a girl's door bell about so often it's up to him to ring her finger.

## UINTAH BASIN LANDS

160 acres all cultivatable, full water right Dry Gulch Irrigation Company, 80 acres fenced, house, well, cellar, few trees, 40 acres cultivated. District school 1 mile. Lies 3 miles north Myton. \$4000, \$2000 cash, balance terms.

160 acres, 155 acres cultivatable, full New Hope Irrigation Company water right, 50 acres Dry Gulch Irrigation water right, house and 20 acres alfalfa. District school adjoining. Situated 4 miles north of Myton. Price \$2500. \$750 down balance easy terms.

R. S. COLLETT

Roosevelt

Utah



good variety for spring planting, where the season is short as it probably is at an elevation of 7000 ft. Koffoid, Lofthouse and Gold Coin are profitable fall varieties in some sections.

LETTER FROM EMERY VALLEY.  
Emery Valley, Garfield Co., Utah.  
Mr. Editor:

Emery Valley is located 56 miles southeast of Marysvale, at an altitude of 7,000 feet. About 60,000 acres of first class land which is nearly all taken up in Deseret and Homesteads, but mostly taken up under the Enlarged Homestead Act. The soils depth is from one foot to forty-two, mostly of a clay loam. Five years ago there was but about six families here, today there is about 350 people. Most of the land is located, and many are raising fair crops. Most of our farming is done by plowing deep in the fall and seeding the coming spring. Some very good results have been obtained. In 1914 a yield of 62 bushels of barley, 52 bushels of oats, 21 to 25 bushels of spring wheat and 35 bushels of rye, all done on spring seeding. In 1914 there was a yield of 37½ bushels of rye on spring planting.

I can hardly agree with the gentleman from Nephi Valley in quoting rye as a lazy man's crop. Perhaps it does not require as much work and moisture, but many a poor family in Europe would be glad of a sack of rye flour, and where alfalfa is not grown rye is very good hay, also good for hogs, and it is better than frosted oats for horses and cows.

Leaving the rye question, we are in a most beautiful valley; plenty of wood and coal within 20 miles; posts and poles, and within 10 miles of saw-mills. Fruit within 25 miles. Good well water can be reached at a depth of from 13 to 70 feet; artesian water can be reached within 350 feet, is the opinion of nearly all farmers.

We would much appreciate a visit from a State Instructor on Dry Farming.

Wishing the Utah Farmer success.  
A Subscriber.

STATEMENT OF THE OWNERSHIP,  
MANAGEMENT, CIRCULATION,  
ETC., REQUIRED BY THE ACT  
OF AUGUST 24, 1912,

of Utah Farmer, published Saturday, at Lehi, Utah, for Oct. 1, 1915. Post-office address, Lehi, Utah. Managing Editor, Business Manager, James M. Kirkham. Publishers, James Kirkham Sons Co., Lessees.

Owners: (If a corporation, give its name and the names and addresses of stockholders holding 1 per cent or more of total stock. If not a corporation give names and addresses of individual owners.) Deseret Farmer Pub. Co.; James M. Kirkham, Lehi, Utah; John A. Widtsøe, Logan, Utah; Thos. Judd, Laverkin, Utah; W. S. Hansen, Fielding, Utah; Jesse Knight, Provo, Utah; R. L. Anderson Estate, Salt Lake City, Utah; L. N. Stohl, Salt Lake City, Utah; John Horsley, Brigham, Utah; John Q. Adams, Logan, Utah.

Known bondholders, mortgagees, and other security holders, holding 1 per cent or more of total amount of bonds, mortgages, or other securities. (If there are none, so state.) None.

JAMES M. KIRKHAM.  
Sworn to and subscribed before me this 30th day of September, 1915.  
(Seal.) WM. E. EVANS,  
Notary Public.

THE LACK OF SMILES  
Personal impressions are always interesting, and I find myself unconsciously asking foreigners that oft-repeated question: "What is the thing that impresses you most?" A returned traveler who had been absent from America for many years, was relating some entertaining incidents concerning his life in South America. It was all very interesting, but his group of auditors, almost in a chorus, demanded: "What impressed you most on your return to America after eight years? What do you find different among the people?"

His face sobered a minute and he said, "I'll tell you. It is the lack of smiles. It seems to me that there are fewer smiling people than when I went away. They don't seem to have the art of smiling, since the use of the telephone came into effect and the rushing about on street railways and subways and looking aloft for the flight of airships. I went away with the impression that the American knew how to smile. Now you only cackle."

This remark set the little group of friends to thinking and looking for causes. Have these years of unexampled prosperity so absorbed the conscious and unconscious thought of the people that they have forgotten how to smile? "The eyes do not have the twinkle," continued the speaker, "that they had in other days. They greet you with a hard, lack-lustre look. Even your friends ask you, before you have hardly exchanged greetings, as to how much you have made, showing the hard-fisted commercial tendencies of the times. The joy and zest of just doing things does not seem to have come with the shortened hours of labor. The listlessness of big, strong men doing work that does not require either physical or mental activities is evaporating a lot of the initiative force of the country."

This indicates one of the results feared in the spirit of socialism, as indicated in the enormous increased cost of having simple things done, simply through a profligate waste of time and energy. The statement has been made by sociological workers that after a person has gotten beyond the use of normal energies he becomes as helpless as the dreaded "dope fiends;" and it is insisted that a man who does not have to work for two years is entirely beyond redemption. The vagrant who feels that he can make his living without working and wont work is a more dangerous individual than the avaricious grafter who finds it convenient to thrive on what others have accumulated, and this is plainly the result of the impulse which leads to the envy and hatred of others who have accumulated wealth with no thought or consideration of the blessings and virtues of simple contentment.

What a refreshing thing it is to find a group of people who do not take themselves so seriously that they can not smile and laugh—not giggle or simper or cackle—but really and wholeheartedly laugh. The lack of a broad sense of humor among the public men of today is looked upon by students as one of the most dangerous aspects of public life.—National Magazine,

PICKLES  
"There are no pickles like home made pickles." The first element of assured success in pickle-making is that all materials employed be of the

There Is One For You

One of these useful premiums for every reader of the Utah Farmer if you hurry. This beautiful and useful sewing book is free with a paid in advance subscription. You should take advantage of this offer today---NOW.



IF THERE IS ANY one thing a woman likes it is a handy sewing set. Containing a needle for every need. Every article is of the best quality. It is handy, convenient and beautiful.

Send your dollar for a years subscription in advance to the Utah Farmer and we will mail you promptly this DeLuxe sewing set. Right now is the time to act.

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The Utah Farmer  
Lehi, Utah

very best. So much depends not only upon the raw products, but the careful selection of vinegar and spices. The safest kettles to use are the agate or the porcelain lined. Wooden spoons are to be preferred in the mixing. A few bits of horse-radish give "life" to the vinegar and prevent mold.

Since cauliflower is in season just now, a "tried" recipe for "Cauliflower Mustard Pickles" is given below:

Divide a large head of cauliflower into pieces, wash and boil, with a dozen white button onions, in salted water until about half done. Drain the cauliflower and onions and add a dozen dill pickles cut into half inch cubes. To two quarts of vinegar add two cupfuls of sugar two teaspoonful of celery seed and one teaspoonful of mustard seed. Bring the whole to a boil.

Mix together three-fourths of a cup-

ful of flour, a quarter of a pound of ground mustard, a tablespoonful of turmeric powder and enough cold water to make a paste. Add this mixture to the boiling vinegar and continue the boiling five minutes longer, then add onions and cauliflower, re-heat and seal. The above makes about a gallon of pickles.—Miriam Haynes, Colorado A. C.

FULL OF IT

At the close of the forenoon session of the ministerial conference in Philadelphia, in announcing the opening subject for the afternoon, the presiding officer said:

"Elder Jones will present a paper on 'The Devil.'" Then he added earnestly, "Please be prompt in attendance, for Brother Jones has a carefully prepared paper, and is full of his subject."—Ex.



## THE HOME

### SUGGESTIONS FOR THE SEWING ROOM.

Laura B. Breese.

For the housewife with children, there probably is no more lingering task in the home, than that of sewing.

The making and mending of the children's clothing and the remodeling of "out of fashion" clothing for herself, is a problem always confronting the mother.

That there is need of the sewing machine in the home is admitted, and there is much of the family clothing that can and should be purchased ready made. The day when the housewife made the sheets and pillow-cases, shirts, overalls, jackets, window curtains, etc., has passed and the progressive housewife of today will turn this sewing over to the factory, thereby saving her strength and time for more important problems. Factory made garments are now becoming more satisfactory in quality and more reasonable in price and women should encourage this industry, which relieves them of the drudgery of sewing.

In the home, the sewing room should be light, well ventilated and fitted with convenient equipment. Plenty of fresh air, sunlight, and a pretty view from the sewing room window, do much toward making sewing more attractive. To lighten the work it is of primary importance that there be order in the sewing room and the equipment kept in good condition.

The machine should be cleaned and oiled occasionally, the scissors kept sharp and the sewing materials, such as thread, buttons, hooks and eyes, etc., kept at hand in a sewing basket or hamper. A sewing table, of the proper height for the one using it, is necessary. A pair of large scissors for cutting will be found a time-saver, and will cut a smoother edge. Self-threading needles save time and annoyance in threading the needle.

There is a combination now of machine head and sewing table which is a great convenience. A motor is attached to run the machine. Any drop head machine can easily be converted into this combination.

A housewife would save herself much annoyance and exhaustion and shorten her sewing tasks if she would plan to sew during those periods only, when she is likely to be uninterrupted. She will save much time by completing each process started, before taking up a new process, e. g., cutting out all piece at a time, basting all, then stitching. While the work is just the same in this method, much time and useless motions are saved by not shifting materials and worker's position so often.

Such details as the cutting of bias pieces, hemming, making button-holes, etc., should be done in one continuous process. Excepting in particular cases, the button-holes should be bought ready made, by the yard—also hooks and eyes and snap fasteners. These can be stitched to the garment underneath a flap and be concealed.

If a number of articles of the same

kind and size are to be made, it will save much time to fold the goods so the number required, can be cut out at once. Great economy will result if all pieces of the pattern are laid on the goods before cutting. Fit the pieces into each other in a way causing the least waste of goods.

When stitching very thin silk, etc., it will make it easier to keep the goods from pulling if a piece of paper is placed under the seam while stitching. The paper may be pulled away easily, afterward.

Anyone wishing to alter a last summer's kimona sleeve waist to stimulate the "set in sleeve" without gathers, may find the following suggestion helpful. Draw a line with a pencil on the pattern of the kimona sleeve waist from under the arm in front to under the arm in back, curving the line in from the sleeve to get the desired length on the shoulder. then rip the under-arm seam of the waist, lay it on the pattern and draw off the line upon the blouse with chalk. Next run a small tuck along this line, and hastily stitch it down with the edge toward the sleeve, and sew up the under-arm seams again. When finished it positively can not be told from the set in sleeve. This method can also be followed in making new blouses.

A convenient bag for trimmings from sewing, may be made on a wire frame which fits or clamps on to the end of the machine, and into which the pieces may be pushed from the machine. A large piece of paper spread over the floor where sewing is done will save much time and annoyance when the room needs to be cleaned. All threads, trimmings, etc., can be rolled in paper and dumped into waste-basket, and the paper laid away for another time.

In the sewing room, as everywhere else, the housewife needs to make her head save her motions and time. She should accustom herself to using all the modern attachments which come with her machine, as they save much work.

### CLEAN MILK.

We have but few dishes which, in their making, do not require milk or one of its products, or which cannot be improved by its use.

The addition of milk improves articles of doubtful food value.

Milk is a balanced ration in itself. It has a peculiar fitness for building up bone and the various tissues and organs of the body.

Milk is one of the most easily digested of all foods. And it can be served in a great variety of appetizing ways.

Skim milk, often regarded as a waste product, is high in nutritive value, because it contains those elements that build up the muscular tissue or lean meat.

Indirectly choice food is produced in the form of veal, pork, and poultry from skim milk.

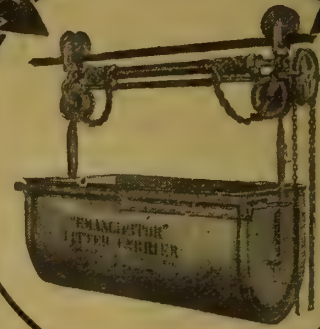
It is estimated that milk and milk products make up about one-sixth of all food eaten by the average American family.

Clean milk is one of the cheapest foods that can be bought on the market.

# LOUDEN



Quick  
and  
Easy  
Barn Work



With  
LOUDEN  
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## PATTERN DEPARTMENT

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7396—Ladies' Dressing Sack. Cut in sizes 34 to 42 inches bust measure. This garment is rendered decorative by the little group of tucks near each shoulder in front. The line of closing has also an ornamental tab at the bosom and the rest of the garment is plain, held in at the waistline by a belt. The sleeves may be long or short.

7428—Girls' Dress. Cut in sizes 6, 8, 10, 12 and 14 years. This pretty frock is made with a separate blouse, which has a high neck and long sleeves. Over this is worn a jacket bodice showing the underblouse at top and bottom and made without sleeves. The two gore skirt is quite full and is joined to the overblouse at the waistline.

7419—Child's Night Drawers. Cut in sizes 1, 3, 5, 7 and 9 years. These night drawers are made with a square yoke in front and with the front and drawers below the yoke in one piece. In the back there is a division across the waistline and the closing down the center.

7438—Girls' Dress. Cut in sizes 6, 8, 10 and 12 years. Very simple is this frock and suitable for school wear. It has a side front closing to both waist and skirt, high neck with flat collar and long or short sleeves. The skirt is arranged in a series of double box pleats, which form a panel in front and meet in the center of the back.

7432—Ladies' Shirt Waist. Cut in sizes 34 to 46 inches bust measure. This bod-

ice has a double breasted closing and two small tucks at each side of the front near the shoulders. The back is plain. The neck is trimmed with an ornamental collar coming down in long revers along the edges of the closing.

7425—Ladies' Dress. Cut in sizes 34 to 46 inches bust measure. In this popular one piece dress we have a plain waist with bias closing. The open neck is trimmed with a wide collar and there is a fancy belt at the waist. The puff sleeves are long, ending in a cuff. The skirt has four gores; it is plain at the top and circular at the lower edge.

7394—Ladies' Yoke Nightgown. Cut in sizes 36 to 46 inches bust measure. This simple design is familiar to all women. The yoke is straight across the shoulders in both front and back, the lower portion full and gathered at the top. The opening is in front, the neck high with small, flat collar, and the sleeves long with a band cuff.

6395—Ladies' Apron. Cut in sizes 36, 40 and 44 inches bust measure. This natty apron is made in princess style, with a semi-fitted panel in front joined to the side bodies by seams which extend from shoulder to hem. The center back and side back portions are joined in the same manner and the closing is placed in the center of the back.

Price of any of the above patterns 10 cents each.

### TO DRESS A RAZOR STROP

To put a razor's edge in condition to cut easily and smoothly remove all dirt and coarse grit from both the sharpening and the finishing sides of the strop and then dress as follows: On the sharpening surface spread a light coat of superfine flour of emery and on the finishing surface apply some rouge (ferric oxide). The commercial grades of these materials as purchased at the drug stores are not sufficiently fine and uniform to be used without preparation. Any coarse grit ruins the edge of the razor while the uniform, fine grit produces the tiny, keen cutting teeth.

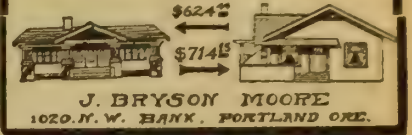
Upon a sheet of smooth paper spread a quantity of the emery flour or the rouge from which it is desired to secure the finest particles. Shake it well around over the paper and then tip the sheet so that the material slides off. A fine dust will then be seen clinging to the surface of the paper. This dust may then be transferred with the finger tip to the surface of the strop and worked into the leather. The occasional application of "3 in 1" oil to the finishing side of the strop will prevent glazing and assist in the production of a keen edge.—L. S. Foltz, Colorado A. C.

### A HIGHLY-BRED HYBRID.

An old Welshman was driving a donkey along a country road. The "moke" refused to go above a snail's pace, notwithstanding repeated blows from a heavy, knotted stick. Thoroughly out of temper, the old man was heard to exclaim: "Go along, you pig, your mother wass a pig, your father wass a pig. Gee up, my son."

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## Little Sir Galahad

An entrancing story by Phoebe Gray, will be run as a serial in **The Juvenile Instructor**, beginning with the October number.

The story is one approved by the General Board as one of the M. I. A. Reading Course, and is especially adapted for the youth of this common wealth.

Following is an opinion by Edward H. Anderson, Associated Editor of **The Improvement Era**, on the Story:

"Little Sir Galahad" is a new book just issued by Small, Maynard and Co. It is a story of a little crippled boy, a little abused girl, a drunken man who is later informed, a kind-hearted but unthinking millionaire and his son who falls victim to intemperance but "comes back" through the fine strength of his own will stimulated by the love of a noble girl. It is a sweet story, told in a way that holds the interest throughout. "Little Sir Galahad" demonstrates the triumph of faith throughout. The book is one of the few novels nowadays that inculcates a living faith in God. It is one of the few books that discountenances the use of tobacco and encourages temperance. The faith of the crippled boy, throughout, is most healthful, the whole text having a tendency towards the establishment of trust in God and belief in what our people term the Word of Wisdom. Phoebe Gray, the author, has succeeded in dressing her characters with a "faithfulness to real life which is absolutely convincing, and which awakens the finest and deepest emotions of the human heart." The book has likewise a "whole-some entertainment, blended skillfully with a great moral lesson."

The **Juvenile Instructor** containing this story and many other excellent features, is \$1 per year.

Address

## JUVENILE INSTRUCTOR

Salt Lake City, Utah



# The Banker and The Farmer

By George T. Wells.

It is generally conceded by economists, financiers and leading business men that the soil and its products are the basic foundation of permanent and increasing prosperity; and unless these show a healthy condition of progress and development, no community, commonwealth or nation can prosper.

The banker is the axis upon which the wheels of commerce revolve, and thorough and consistent study must be given by him to each branch of his customers' activities. Overproduction, inadequate marketing facilities, congested transportation and insufficient money or credit also become pertinent subjects for the banker to analyze and study.

In a sense the country banker is more directly interested in agricultural development, yet when we stop to consider we find the city banker as much concerned as his country client for these reasons:

He is constantly called upon to re-discount the notes which the country banker has taken from the farmers that they may harvest and market their crops, or purchase livestock, either to fatten for market or to increase their herds, also for constructive development purposes such as modern equipment, machinery and silos.

Further—the rural communities must be prosperous in order to buy, that the manufacturers, jobbers, wholesalers and commission men of the city may live and prosper. Obviously the city banker is dependent upon these people for his business.

It behooves every banker to study and interest himself in agricultural methods and development, not so much to see that the farmer receives scientific training, but that he may be better able to confer with the farmer, and to understand his problems and necessities.

To gather such data as will inform him of the crops grown in his locality, and so be able to assist in regulating the output in order that there will not be an overproduction in some products and a shortage in others.

The banker having direct business relations with the farmer should so study these subjects that he can intelligently discuss the questions of diversification, rotation of crops, etc., in a manner that will win the farmers' confidence and respect. Then should the banker see fit to make suggestions as to changes of method they will be properly received. In other words, his advice to be of value should be based upon definite knowledge.

Many times the farmer unwisely places his entire dependence on one crop, not even digressing enough to provide for his own table. In case of failure he often relies upon the banker to tide him over to a future crop. At such times the advice of the well-informed banker properly given and received would not only benefit the individual, but the community as a whole.

Some livestock should be on every farm—at least sufficient to consume the unmarketable products and to provide as well towards the table. Hogs and poultry are excellent for this purpose, not only because they

are best adapted to consume the refuse of the farm, but that the original investment is within reach of every one. The farmer who has a few cows to convert his product into milk and cream will find the check he receives from the creamery each month quite a factor towards contentment and independence.

Livestock is also the solution of getting the farmers' produce to market, especially in the Western states where the railroad hauls are long and expensive. It is deplorable, but true, that both livestock men and farmers frequently and shortsightedly congest their local railroad shipping facilities at certain seasons to such an extent, by a lack of co-operation, that the inevitable delays bring to them losses both in time and money. Western alfalfa and livestock raised on the same places have been shipped to eastern points, and there the former was fed to the latter; whereas, had there been proper co-operative organization at home the feeding would have been done there, thus eliminating expense and delay, and in addition conserve the manures so much needed in the West on account of the highly mineralized soils and thus adding greatly to the productive possibilities.

To sum up:

(1) When farming is prosperous, all other lines of business prosper.

(2) When farming is unprofitable, all business is cramped.

(3) By increasing the profits of farming, bank deposits and loans increase.

(4) By increasing the profits of farming, the sales and profits of every other line of business are increased.

(5) There is not a single county in the United States where the farmers could not double their profits by better farming and better business and marketing methods which can be obtained only by the co-operation of all business interests, and especially the bankers.

(6) The greatest efficiency in farming is found where business men co-operate actively with the farmers.

(7) Livestock and all its by-products assure a cash market right at home, and are in many instances more profitable than the open market.

(8) Let the banker take interest in the farmer—not altogether from him.

(9) Co-operation is the keynote of modern progress—it is the Golden Rule in action.

## LIVE STOCK HELPS FARMER MARKET HIS BY-PRODUCT

In exclusive grain farming there is no successful way of utilizing the large amount of roughage, such as straw and corn stover, which results as a by-product in the growing of the cash crops. Such materials are merely in the way and are disposed of in the earliest manner, often by burning, without regards for the loss of vegetable matter, so much needed by the soil. In a well-planned system of stock husbandry all these materials are utilized for feed or bedding. Much forage which can not be consumed by humans and would otherwise be wasted is thus refined through the agency

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Regard every advertisement as a personal message to yourself only.

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Don't say we're only bluffing about this—put us to the test, and then if we fail you, stop your paper and ask for your money back.

We don't want to brag on ourselves, offensively—but we do want you to get what's coming to you—the willing service of our entire organization.

of animals and converted into a form suitable for the nourishment of man, while a large part of the organic matter is returned to the fields in the resulting manure. Immense amounts of by-products result from the manufacture of the cereals and other seeds into flour breakfast foods, vegetable oils etc. While unsuited for humans, some of these by-products are among our most valued feeds for stock. As the density of population increases and the prices of food stuffs advance, the feed supplied our farm animals must, to an ever increasing extent, consist of substances resulting secondarily from the making of human food, whether they be coarse roughage or milling by-products.

In some sections of our country much of the land is so rough or stony that it can not be cropped economically. Here cattle will gather the grass on the smoother stretches and sheep will search out the herbage on the more inaccessible, rocky slopes. Over great areas of the west there is too little rainfall to warrant even dry farming, and irrigation will never be possible, either because of lack of water or the roughness of the land. Yet stock will thrive on the scanty but highly nutritious grasses and other forage. Through well-planned systems of grazing with additional feed in time of winter storm or parching drought, the western ranges should at no far distant date, carry even more stock than they did before large areas were broken up into farms. In the cut-over districts of our country large areas of land may be profitably grazed by live stock before they are finally brought under tillage.

Under exclusive grain farming the chief demand for labor, is confined to

the periods of preparing the land, planting the crops, harvesting, and later marketing the products. During the rush seasons labor is high-priced, and often hard to secure at any cost. On the other hand, live-stock farming offers employment throughout the entire year. Winter, when little other farm work can be done, is the very season when farm animals require the most care and attention, for they are then usually housed instead of at pasture. Because the live-stock farmer can thus offer steady employment he is usually able to secure men who are both more efficient and more reliable than he would otherwise be able to obtain.—University of Wisconsin.

## BIG CHEW OF TOBACCO CAUSES DEATH OF COW.

Bethany, Mo., Aug. 16.—William Rogers, a farmer near here, returned home from town rather late and, in the rush of doing chores, he left a three-pound package of plug tobacco on the wagon seat.

When he went after it early the next morning he found one of his best milch cows standing by the wagon, diligently chewing. The cow had eaten two and a half pounds of the tobacco. A veterinarian was summoned, but the cow died several hours afterward.—Exchange.

The first investment in raising pork is small and the pig is a quick money maker on the farm. He multiplies rapidly, and if we only furnish him good pasture, grazing crops, pure water, and a little concentrated feed he will rapidly gain weight at a small cost.



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# Bloat---Cause and Treatment

## Irrigation

Throughout the alfalfa-growing section—and this includes all our reclamation projects—there is much complaint of serious cases of bloat caused by grazing alfalfa. Some losses of stock have occurred, and it is probable that some of our farmers are not making full use of their alfalfa pasture is one of our greatest assets, and we should make the fullest possible use of it, taking the simple precautions necessary to prevent loss from bloat.

Bloat is the result of fermentation of food in the stomach of the animal; this fermentation causes gases, which distend the abdominal cavities. Alfalfa contains certain elements which if taken in considerable quantities under certain conditions ferment quickly. Careful observation of alfalfa grazing leads to the conclusion that practically all cases of alfalfa bloat are caused by the following conditions: Turning hungry stock on young alfalfa; grazing alfalfa when it is wet with dew or rain; free grazing of alfalfa when it is making rapid growth; grazing when it is first frosted or when it is freezing and thawing.

Many preventives of bloat have been given publicity. Some of them are fully successful and some partially so. The busy farmer does not have time to keep close watch of his grazing stock, and the most simple preventives are the most useful. One of the most practical preventives is the plan common in some of the southern States of seeding into the alfalfa pastures a crop of barley and grazing the combined alfalfa-barley crop, which does not cause bloat. This plan may be changed to suit various localities and other crops which do not cause bloat may be seeded in the alfalfa pastures. Another good plan is to give the stock a good feed of cured alfalfa hay before turning on the pasture each day. The stock are less liable to gorge themselves if this plan is followed. Some advocate keeping in the alfalfa pasture a rack filled with cured alfalfa. It is not believed, however, that this plan is as satisfactory as that of feeding the cured alfalfa before turning the stock into the pasture. When the number of animals to be grazed is

limited, a successful plan is to fit into the mouth of each animal a large bridle bit or a wooden bit made for the purpose. This prevents the stock from eating too fast and decreases the danger of an accumulation of gases.

It has been found that it is practically impossible to prevent bloat entirely. It is necessary, therefore, that every farmer have at hand at least one reliable remedy for bloat.

I find it a common practice to exercise animals that are suffering from bloat. In my opinion this is a serious mistake. I know of a number of heavy losses from exercising cattle and sheep while they were suffering from bloat. Let the animals remain as quiet as is possible. It is generally understood that the suffering animals may be afforded relief if they are stood so their fore feet are considerable higher than their hind feet.

As has been stated, bloat is caused by fermentation of foods in the stomach, and cures for bloat must act internally in such manner as to prevent this fermentation, and this internal treatment should be supplemented by some treatment which will aid the escape of the gases which have formed in the stomach.

Following are simple remedies, given in quantities which are doses suitable for full-grown cattle, each remedy is to be given as a drench:

- (1) One to two ounces of turpentine well shaken into 2 quarts of milk.
- (2) One ounce of aromatic spirits of ammonia in 1 quart of water.
- (3) One-half ounce of chloride of lime in 1 pint of water.
- (4) One-half pint of melted lard placed well back in the throat.
- (5) One and one-third ounces of formalin in 1 quart of water.
- (6) One pound of baking soda and three heaping tablespoonfuls of ginger in 1 to 2 quarts of water.

After giving any one of the above-named remedies, it is well to place a wooden bit or block of wood in the animal's mouth to keep it open that the gases may escape without hindrance. Some recommend that about 3 feet of 1/2-inch hose be worked down

a cow's throat to assist the gases to escape.

Some cases of bloat are, when discovered, too much developed and too serious to permit attempt at relief through drenches. In these cases the one sure cure is the use of the trocar and cannula. This is a simple and inexpensive instrument consisting of the trocar—a sharpened steel "stick-er"—which fits inside a steel tube called the cannula. The entire instrument is about as thick as a lead pencil and from 4 to 7 inches in length. This instrument should be kept well oiled and clean.

In tapping a bloated cow the instrument is to be inserted through the hide on the left side at a point about half way between the last rib and the point of the hip. Use care not to make the puncture too high. Point the trocar in the general direction of the right shoulder and with one blow drive the instrument in to the hilt. Then pull out the trocar, leaving the cannula inserted, and the gases escape direct from the animal's stomach through this tube. Don't be afraid of killing the cow. Just bear in mind that the stomach punctured is about the size of a wash tub and no vital organs are touched. Let the cannula remain in place an hour or so, keeping watch on it that it does not become clogged. As soon as you have punctured the animal's stomach, give one of the drenches described in this article in order that the fermentation in the stomach may be stopped. When you remove the cannula from the puncture rub a little tar or tincture of iodine over the wound and no trouble will result.

By all means utilize your alfalfa pasture. With ordinary care you will lose no stock from bloat.

## RAISING CALVES.

One of the first necessities in raising calves in the fall is to have clean, dry, sunny and well ventilated pens. Young calves do not do well in damp dingy quarters. A good floor made of cement and well covered with straw will keep the calves warm and dry. A wood floor is not a bad one, but the cement, perhaps, is the best to be had and likely the cheapest in the end. The dirt floor has many disadvantages one of which is, it can not be kept dry and sanitary.

Fresh air is of vast importance, it adds to the vitality and helps to por-

duce muscle and fat. In two years the calf is expected to be the dairy cow, so if a good productive cow is to be had, then too much care can not be given when a calf.

There may be several reasons for raising fall calves. First, the dairy products are a better price during the winter months. Then the farmer has more time for the care of his cows, besides the average cow will give milk longer for the reason of the spring grass. Another thing, the calves coming in the fall makes them old enough to wean in the spring and turn out on the pasture. They will be old enough and growing sufficient that by mid-summer the flies will not bother and injure their growth so much. Spring calves will not do so well as the heat and flies are not in their favor and they have not grown enough to make them strong and hardy for the summer months.

The fall of the year is the time when the farmer may use his spare time to a good advantage taking care of calves: It is unwise to have them come too late in the fall as the winter will be against them. Too much care can not be given that they have a clean place and a dry bed to sleep on. With a little care and work it is possible that the farmer may add several dollars to his purse at this time. It is like all other farm work, it demands careful attention and at the right time.—J. M. Baldwin.

## THOUGHTS FOR THE DISCOURAGED FARMER.

By James Whitcomb Riley  
They've been a heap o' rain, but the suns out today,  
And the clouds of the wet spell is all cleared away,  
And the woods is all the greener, and the grass is greener still;  
It may rain again tomorrow, but I don't think it will.

Some says the crops is ruined, and the corn's drowned out,  
And proph-a-y the wheat will be a failure, without doubt;  
But the kind Providence that has never failed us yet,  
Will be on hand onc't more at the 'leventh hour, I bet!

It is sometimes said that it does not pay to make mistakes; but close analysis usually discloses the fact that the man who progresses is the one who does profit by his mistakes. —Merchants Trade Journal.



## Sewing Lesson

### THE PLACKET OF THE SLIP.

#### Lesson VIII.

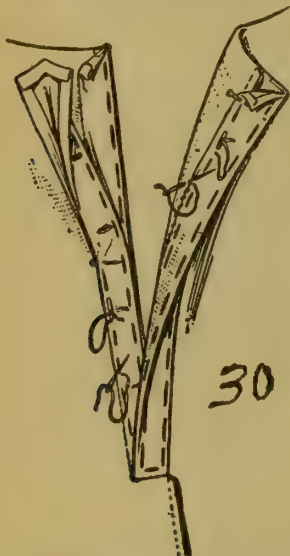
**The Facing, the Underlap and the Fly Supplies**—Thimble; Needle, No. 7 Sharps; Basting Cotton; No. 60 Sewing Cotton; Emery; Pins; Tape-Measure; Scissors: The Princess Undergarment; Note-book.

**The Placket**—The placket is finished with an underlap, a facing and a fly.

**The Facing**—Measure the length of your placket opening from the neck edge to the bottom of the opening and make a note of it in your book.

Cut a facing for the right side of the placket. It should be an inch and three-quarters wide and three-eighths of an inch longer than the placket opening and should be cut lengthwise of the material.

Join one long edge of the facing to the right side of the placket with their right sides together and the edges even. Pin the edges and then baste



No. 30—The Facing, Underlap and Fly on the Placket of Opening.

them three-eighths of an inch from the edge. (Ill. No. 30.) Sew the seam with running stitches just beyond the basting.

Take out the basting stitches and turn the facing to the wrong side of the placket, folding it so that the sewing comes in the crease. Baste it near the fold so that it will not slip. Turn under the other long edge and lower edge of the facing three-eighths of an inch and baste them to the garment. Sew them at the fold edge with fine hemming stitches. (Ill. No. 30.)

**The Underlap**—Cut an underlap for the left side of the placket. It should be two and a half inches wide and three-eighths of an inch longer than the placket opening, and should be cut lengthwise of the material.

Join one long edge of the underlap to the left edge of the placket just as you joined the first edge of the facing to the right edge. (Ill. No. 30.)

Turn in the other long edge of the underlap and baste it to the garment so that it just covers the sewing of the placket seam. (Ill. No. 30.) Turn in the lower edges of the underlap three-eighths of an inch and baste the fold edges together. (Ill. No. 30.) Hem the fold of the long edge of the underlap to the garment with neat hemming stitches. Overhand the fold edges of the lower part of the underlap together.

**The Fly**—Cut a fly two and a half inches wide and three-eighths of an inch longer than the placket opening. It must be cut lengthwise of the material.

Fold it lengthwise through the center, bringing the two long edges together. Baste it along the fold. (Ill. No. 30.) Turn under the lower edge three-eighths of an inch and baste it to the fly.

Turn in the long edges of the fly three-eighths of an inch, crease them; bring the fold edges together and baste them. (Ill. No. 30.)

**The Buttonholes**—Cut the buttonholes and work them. There should be one buttonhole a half an inch from the top of the fly. The others should be about three inches apart. The round end of the buttonholes should be worked toward the fold or outer edge of the fly.

Lay the fly on the inside of the right side of the garment with its turned-in edges just covering the sewing of the facing of the placket. Baste it to the garment. (Ill. No. 30.) Sew it to the garment with fine hemming stitches. (Ill. No. 30.) Sew the ends of the facing, fly and underlap to the garment with backstitches.

Lap the back edges of the garment so that the underlap comes exactly under the facing and fly on the right back. Pin the right edge to the underlap and push a pin through the center of each buttonhole into the underlap to mark the place for the button. Unpin the backs and sew on the buttons.

**The Hem**—Turn up the bottom of the garment two and three-eighths inches, measuring it carefully and pinning it so that it will not slip. Baste it near the fold edge. Turn under the upper edge three-eighths of an inch, crease it and baste it to the garment, easing in the slight fullness at the top of the hem. Sew the fold edge of the hem to the garment with neat hemming stitches.

### PAINTING.

By Walt Mason.

Now the husband paints the fence, while the housewife paints her face, and, with energy intense, we are painting, every place. We enjoy this useful toil, which will make the town more fair, and we smell a linseed oil, and there's ochre in our hair. Paint would beautify the spheres, and we heave no useless sighs, if there's putty in our ears and some varnish in our eyes. Wheresoever brush is laid, an improvement then is seen, and no odds about the shade—lilac, lavender or green. You will say, "I am surprised, that you preach paint evermore; you have sure been subsidized by some paint and varnish store." But I haven't a yen from the dealers in red lead, since I started urging men to embellish house and shed. Some men tell you how to vote, others tell you how to pray, but I'm wearing out my throat shrieking, "Paint UP!" all the day. It's because I hope to make this old world a brighter place that I urge you tell I break both suspenders and a trace. Blow yourself for linseed oil, blow yourself for lead and zinc, or your residence will spoll; paint it blue, with stripes of pink.

Envy not the proud man. The peacock today is often the feather duster tomorrow.—Exchange.

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Write for price and details.  
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rm for sale. Send cash price and de-  
ription. D. F. Bush, Minneapolis, Minn.

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tion, well stocked, independent water  
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fenced. Located near Richfield, Utah.  
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proved, near Springfield, Idaho; \$15,000.  
Will take some Salt Lake property.  
120 acres, fully equipped, with 93 inches  
of water. \$10,500. Will take Salt Lake  
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land fine summer range, for quick  
sale, \$1900; \$900 cash, bal. easy.

160 acres, South Jordan, \$15 per acre.  
Terms. 160 acres near Welby, \$20 acre.  
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Bountiful \$3150—half cash.

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single or double driver; also purebred  
English Burro. Cheap for cash. Will  
consider cow and heifer in trade.—Henry  
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Foundation Stock in Holstein  
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R. D. No. 2. Provo, Utah.

## Use of Bird Determines Feed

Growth May Be Stimulated for Early  
Marketing—Constant Care Necessary.

In bringing the chick from the  
hatch to maturity, the kind of feed  
to be used depends much upon the  
use to which the bird is going to be  
put. If the fowl is to be marketed  
at an early age, rapid growth is es-  
sential. The milk feeding method  
will stimulate this rapid growth.

If the bird is to be used as a layer  
or breeder, on the other hand, there  
should be a slow but steady growth.  
This can best be obtained by feeding  
a wheat and corn or kafir ration sup-  
plemented by bran, shorts, sour milk,  
beef scraps, clover, oyster shell, and  
grit.

Many a poultryman makes the mis-  
take of feeding only fat producing  
foods. He expects the chick to pro-  
duce bone, sinew, and feathers from  
this one food. Perhaps the grain  
that is most frequently used in this  
way is corn. A certain amount of

## FANCIERS OF DUROC JERSEY HOGS MEET US AT THE STATE FAIR

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We will there exhibit the wonderful boar, RICHARDS  
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corn is essential in producing energy  
and animal heat, but the mistake  
should not be made of feeding it ex-  
clusively and expecting the little  
chick to develop bone and muscle.

Ash and mineral matter are essen-  
tial parts of the chick's rations if  
you expect it to develop into a large,  
strong boned bird. Some of this min-  
eral matter the chick gets from  
clover, alfalfa, and other green  
foods, but not enough. Mineral mat-  
ter therefore is supplied in the form  
of beef scrap and finely ground oyster  
shell. The beef scrap should be fed  
in small quantities, and the amount  
increased as the chicks grow older.

Poultry authorities do not agree as  
to whether or not the chick should be  
made to scratch for his food. Some  
advise a shallow litter of light straw  
or chaff, some a deep litter, while  
some say to use no litter at all. One  
thing is certain, however—the chick  
must have exercise.

When the chicks are kept cooped  
up and cannot run on the ground  
they soon form the habit of standing  
around and then the poultryman's  
troubles begin. Artificial exercise  
must be supplied. Some poultrymen  
make the chick scratch for his food,  
others suspend vegetables at which  
the chicks jump. When the chicks  
can have access to an outdoor run-  
way they will as a rule exercise  
sufficiently so that no artificial form  
of exercise need be supplied.

For the first week after hatching  
a feed composed of hard boiled eggs,  
ground shell and all, mixed with five  
times as much rolled oats as eggs,  
will serve as a good feed. A little  
finely ground chick grit and pulver-  
ized charcoal should be sprinkled  
over the food. Plenty of clean, fresh  
water must be supplied at all times.  
Sour milk is good if it can be se-  
cured. Finely cracked wheat and corn  
should gradually be added after the  
first day or two. A shallow box con-  
taining bran should be kept before  
the chicks at all times. This should  
be given to them on the first day so  
that they will form a taste for it. A  
little beef scrap and corn meal can  
gradually be added to the brain.

Constant care, watchfulness, and  
patience are qualities of the good  
poultryman, and the person who ap-  
plies these to the raising of young  
chicks is bound to succeed.

## WHY NOT ADVERTISE?

If you have some pure bred stock  
and want to sell them, why not use  
a little advertisement on this page?  
It will bring results. Try it.

## THE BROOD SOW.

The success of the prosperous hog  
breeder is due to the wise selection  
of the brood sow, as well as the wise  
selection of the herd boar.

In selection of the individual ani-  
mal, there are a few points to con-  
sider. In general appearance, the  
sow should be fairly low set, good  
length, good constitution, deep bod-  
ied, strong back and symmetrical  
throughout. She should stand square  
on strong feet and legs. Her head  
should be refined, indicating quality  
and present a feminine (breedy) ap-  
pearance. The shoulders should be  
broad, deep, smooth on top and well  
fleshed. The back should be strong,  
slightly arched and with well sprung  
ribs. The loin should be wide, thick  
and strong. The sides should be long,  
deep and smooth, free from wrinkles.  
The rump should be broad and well  
carried out, (not too drooping.) The  
hams should be wide, deep and well  
filled down to the hocks. The legs  
should be straight and have quality  
and substance combined.

Other things besides individuality  
must be considered. One of the most  
important characters of the brood sow  
is fecundity, that is, the bearing of  
large litters. It costs just as much  
to winter a brood sow that produces  
three or four pigs in the spring as it  
does to winter one that will produce  
eight or nine. In selecting the brood  
sow, it is well to select those from  
large litters and whose mothers and  
grandmothers were from large litters.

After the first crop of pigs are  
weaned, the poor mothers and the  
sows that produced small, runty lit-  
ters should be culled out and sent to  
the butcher.

Good sows improve for a number of  
years in the number size of pigs  
they produce to the litter. At the  
Wisconsin Experiment Station, year-  
ling sows averaged 7.8 pigs per litter  
with an average weight of 14.2 pounds  
per litter, while sows from four to  
five years old averaged 9 pigs per lit-  
ter, with an average weight of 26  
pounds per litter. The United States  
Department of Agriculture compiled  
the records of over six thousand sows  
and found that yearling sows aver-  
aged 6.65 pigs per litter and five year  
old sows averaged 8.4 pigs per litter.

The practice of some farmers sell-  
ing their old brood sows each year  
and replacing them with immature  
ones is a bad one, as the older sows  
are better mothers and produce larger  
and stronger litters.—C. W. Hickman,  
Idaho Experiment Station.



## Put Farm Machinery Away

John Harris Salt Lake County.

The harvesting season is nearly over with the exception of beets and potatoes and I am greatly surprised at the amount of farm machinery that is left out of doors unprotected. What are we going to do about it? Leave it under some leafless tree or behind some wire fence during the coming winter. You can see the harrow, plow, binder, mowing machines, hay-rakes and many other about the farms unprotected.

There is little question that more farm machinery is rendered useless through neglect than through actual work. Annually the farmers spend dollars for farm machinery. There is scarcely a farm in the state which does not at planting or harvesting time each year buy some new machine. On many farms several pieces are bought. It would be worth while for each farmer to list the machinery he has on his farm and to add to that list the value of each new machine bought and thus arrive at a realization of his actual investment in machinery. Should this be done we are certain that many farmers would be surprised at the machinery cost of farming and so be led to the better care of the implements purchased.

Some people have tried to figure out just how much depreciation there is to farm machinery when it is not properly cared for.

I am certain that the life of the exposed machine is less than one-half as long as the life of the housed machine. It would appear from this, therefore, that one-half of the machinery expense on every farm could be saved if the machinery were protected from the rain, snow, wind and sun.

A machinery shed is not expensive. One can be built for the average farm for the expenditure of a few dollars. Depending upon the sizes kind of material used.

The shed be made as a lean-to for some building now on the farm. The farmer will have to throw in a little labor if he builds a machine shed at a small cost, but this labor will require no actual cash outlay. Unless the shed be large so that the machines can be run in without being taken down, it will be necessary to spend a little time in taking the machinery apart and storing it snugly. On many farms the machinery can be stored in the present buildings if the owner will take the machinery down and find a place here and there for its different parts.

Even though reasonable storage is given the machinery of the farm it will pay to thoroughly paint all the wooden parts. Paint as well as grease, has a value in extending the life of farm machinery. Paint does not cost much money, but it does require a little labor in spreading. The time, though, will not be missed if there is a desire to put it on. There is not a handler thing about the farm than a gallon pail of red paint and a paint brush, and these kept in readiness for use in an odd moment.

We need up-to-date machinery. We must have it, if the labor on the farm is to be done as expeditiously and as economically as it need be, but we cannot afford to drain upon the resources of the farm to the extent of

purchasing two pieces of machinery when one with proper care would have sufficed.

### HOW TO REMOVE PAINT.

"If possible, please tell me how to remove old paint and varnish from vehicles, such as buggies, automobiles, etc., in the quickest and most effective manner. How would you remove paint from the interior portion of houses as well as from the outside?"

Paint on the exterior or interior of houses that is not too old and hard may be removed by so-called paint removers that can be purchased at any paint store. When it comes to varnished vehicles, however, one can not do a good job with the ordinary paint removers, the varnish being too hard for these preparations to exert any solvent action thereon. In such cases a gasoline torch is used; in fact, a torch is the best appliance to use in all cases where a first-class job is desired. Torches that are especially made for this purpose can be purchased at wholesale paint stores. In other words, any retail paint store can secure one for you. The torch is merely a can capable of holding from one to two quarts of gasoline to which a burner and air pump are attached. A flame is generated and played in the painted surface just enough to blister the paint or varnish, which is then scraped off. This is also the usual method employed for removing old paint from houses where a first-class job is desired. It is also employed for buggy bodies, but ordinarily is not used for the wheels, although it is the most effective. Some carriage painters remove the paint from wheels of buggies with gasoline or other preparation and sandpaper. This answers the purpose fairly well and saves a little time. After the paint has been removed the usual priming coat should be applied before painting and varnishing.

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By Phoebe Gray

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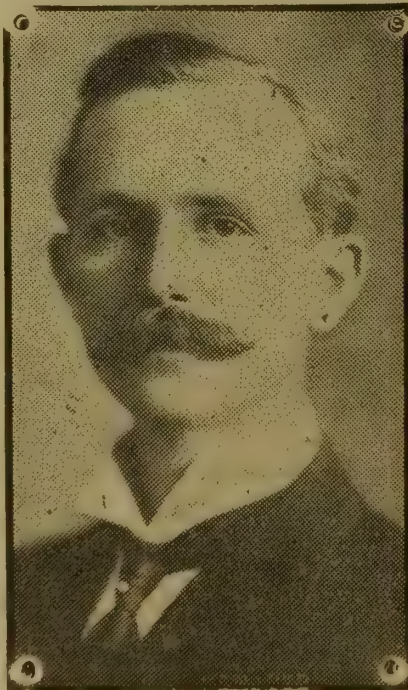
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VOLUME XII; No. 10

LEHI AND SALT LAKE CITY, UTAH

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GRAND CHAMPION BULL, ANY AGE.  
OWNED BY WINTERTON BROS.  
CHARLESTON, UTAH.

(See Page Five)



## Co-operation of Dairy Inspector and the Producer

Delivered before the annual meeting of the Northwestern Dairy Inspectors Association at Seattle, Washington, by J. C. Dorman, U. S. Western Dairy Division, Salt Lake City, Utah.

A few years ago the consideration of this subject would have been impossible because there was no co-operation. The dairy inspector was looked upon by the producer as nothing more or less than a policeman and a nuisance and the producer spent more time in planning how he could fool the inspector and evade the law, than he did in trying to improve his products. Under such conditions it was impossible to make much progress. Within the past few years, however, methods of dairy inspection have changed and in many localities the dairy inspector is received as a welcome guest and the dairymen's best friend. Here in the North-West, particularly, methods of inspection are being adopted and the class of inspectors that are being chosen are such as to bring forth excellent results. As far as my observations go, I believe that more real progress and more improvement in dairying conditions have been made here in the past two or three years than in any other section of the United States, and it is due largely to the personality of the inspectors and their success in securing the co-operation of the producers. The dairy inspectors have many problems to work out in their relations with the producers. He must be at once a diplomat, an educator, a shrewd judge of human nature and last when other means fail, a policeman. He must be a practical dairyman as well, if he wishes to gain the confidence of the producer and assist him in improving conditions.

An inspector that is not qualified for the position is of little assistance to those who employ him and often he is a menace to the dairy industry. I have a personal acquaintance with many inspectors in many states and while the average inspector will grade up high in efficiency there will be a few that will get appointments for reasons other than their qualifications for the place.

I was once invited to make the rounds with a city inspector in another state. This man had been a plumber

before being appointed. I was told that he was a very poor plumber and whether he was a good inspector I could not determine. He just walked around, looked wise and said nothing. He was very careful to look after drainage but was otherwise of no assistance to the dairymen or to the Board of Health. Such men in the position is a parasite on the city.

Another man who had been and undertaker was appointed as dairy inspector. He was industrious in looking after the health of the cows and whenever he looked at a cow I imagined he was trying to decide how long she would live. I would not have been surprised if he had advised the dairyman to use preservatives to embalm the milk.

Another inspector with whom I was acquainted was a veterinary surgeon. He started into reform the entire community. His set of rules for the dairymen were ideal and he gave notice that they must be complied within 30 days or stop selling milk. The result was that more than half of the dairymen had to go out of business and those remained, put in the improvements at great expense. This inspector could not wait for gradual improvement or the co-operation of the dairymen but backed by the Board of Health, he was able to force the improvements at the expense of the industry. It will take several years to build up the industry again to where it was before his regime.

In another city of about 100,000 population the Health Officer wished to make a record for his Department. He was reporting from week to week the great improvements that were being made. Among other things he established a milk station where mothers could secure pure milk for babies during the summer months. At the end of the season he reported that the distribution of this pure milk had reduced the death rate among infants 40 per cent. Upon investigation it was found that the highest amount of milk distributed daily was 24 quarts. This good Doctor may have been honest in his judgment of the results but he was too slow in taking advantage of the situation. He should have increased the amount of milk and saved them all.

The object of the inspector is to improve sanitary conditions and to improve the quality of dairy products in his territory of inspection. Very often he must go about getting his results in an indirect way. The producers object in being in the dairy business is a financial one. The inspector should always bear this in mind when he requests the producer to improve sanitary conditions. The idea of investing additional money in a poor paying business, does not appeal to any one, unless he can be shown how it will increase profits. The dairy inspectors in this country who have made the greatest progress in improving sanitary conditions and at the same time help to build up the dairy industry, have done so by first assisting the producer to make more

"And the rain descended and the floods came and the winds blew and beat upon that house and it fell not, for it was founded upon a rock."



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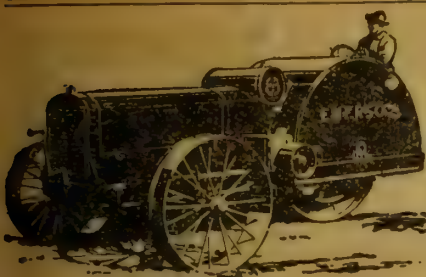
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profit from his business. When this is done, sanitary improvements will follow.

This method applies to state and city inspectors as well as inspectors employed by large handlers of dairy products. While the latter do not have police powers they do have opportunities to induce dairymen to adopt improved methods, that other inspectors do not have. For example:

A large eastern city having a squad of dairy inspectors for several years at work in the territory, supplying the market milk made very little progress, the inspectors doing approximately nothing but police work. They endeavored to force dairymen to remodel barns, brush the cows and did force the turbercoline test to some extent. This was resented by dairymen and many of them sold their herds rather than comply with all the regulations of the Board of Health. When conditions were at their worst, a representative of a large milk distributing company visited the dairymen and with a set of rules that required the dairymen to have a concrete floor with drainage, a separate room for cooling the milk, give special attention to cleaning cows and have their herds tested for tuberculosis. In fact the rules were very similar to those required by the Board of Health. After reading these rules to the dairymen they were told that when they complied with the requirements set forth by these rules they would be given a substantial increase in price for the milk. It was only a matter of a few minutes for a dairymen to calculate how long it would take to pay for these improvements and as he considered at the expense of the company. Almost every dairymen approached, accepted this proposition and the improvements made in the quality of milk sent into that city within a few months was astonishing and a closer relation existed between the producer and the company than ever before.

The object of the inspector was accomplished at very little expense which was offset by the increased business of the company and the satisfaction of handling a better product.

There are other ways that the inspector can induce dairymen to adopt improved methods and that is, through demonstration. On the average dairy farm there are few modern methods in use. There have been so few influences and object lesson near from which to learn in a practical way how and what to improve with. This opens up a large field for such work and it cannot be undertaken in a wholesale way but the influences of one man can radiate throughout the whole community. The problem of the inspector is to find the right men with whom to co-operate in order to create the object lessons. They must be men who are willing to take suggestions and act on them when shown that a change of methods will be desirable. Such men are interested in herd improvement both of feeding and breeding. They must give the inspector full co-operation in building up the herd and putting the business on a profitable basis. It is needless to say that the inspector himself must be a practical dairymen and it will require all his skill and judgment to pilot such work through to a successful issue. When it is done, however, there will be such an object lesson for the whole community that

will have a tremendous influence on every farmer. There is usually a leading man in every neighborhood. A best farmer in every county. Every other farmer regulates his operations to a certain extent on what this best or most successful farmer is doing. These are men the inspector should endeavor to influence to further improvements and use them as object lessons for the benefit of others.

The quality and purity of our food products are receiving more attention now than ever before. The consuming public is being educated and are demanding purity and quality. I believe that quality will be the leading factor in determining the profits of food manufacturers within the next few years. This is particularly true of dairy products. The most successful creameries today are the ones that make a high grade butter. The first quality butter has scarcely no competition on the market for there is so little of it.

The dairy inspector has a great responsibility on his shoulders for he will in the future become more and more a factor in the production of clean dairy products, which is so necessary in safe guarding public health.

### INCREASE USE OF

#### NATIONAL FORESTS.

There were 18,342 special-use permits in force on the National Forests on June 30 last, according to figures just compiled by the U. S. Forest Service to show the varied uses to which the public is putting the Government land involved. The list includes 59 apiaries, 2 brick yards, 31 canneries, 39 cemeteries, 9 churches, 1 cranberry marsh, 32 fish hatcheries, 1 golf links, 43 hotels, 1 astronomical observatory, 10 fox and rabbit ranches, 1,085 residences, 74 resorts and club houses, 3 sanitariums, 500 sawmills, 163 schools, 9 slaughter houses, 57 stores, 16 municipal watersheds, and 182 water power sites, with many other uses. Fees collected on 7,895 of these permits contributed a total of \$175,840.40 to the general Forest revenues, but 10,447 of the permits were issued without charge.

The permits cover more than 1,087,000 acres and 15,041 miles of right-of-way, granted for various purposes, these figures including 173,131 acres for municipal watersheds, 6,572 miles for telephone lines, and 80,593 acres and 1,919 miles for reservoirs, canals, pipe lines, and other irrigation and domestic supply works.

The steady growth of National Forest business is shown in columns of yearly figures going back to the last century. Between 1891, when the first Forests were established, and 1900 there were only six timber sales. The number in 1915 was 10,905. The number of free timber permits has risen from 283 in 1901 to 40,040 in 1915, and of grazing permits from 2,317 in 1901 to 30,610 in 1915. The special use permits, which were only 298 up to the end of 1905, were increased by 5,657 in 1915, making a total during the last 11 years of 42,369. Of these 18,342 are now in force.

### ROAD MAINTENANCE.

Road construction is the first important factor in lessening the cost of transportation to railway lines from the farm; the other, and more important, factor is road maintenance, which should begin immediately upon

the completion of the road and be kept up indefinitely or for all time. The first matter of significance in road maintenance is to have the road properly constructed. With our roads properly graded with good open drainage the matter of maintenance is then simple.

There is really only one method and that is by means of the split-log drag. This valuable piece of road machinery is so cheap, simple and practical, and works so well, that—well few will use it. Yet those roads where it is used intelligently are almost ideal country roads and are ready for traffic a very short time after the heaviest rains.

Just why road maintenance is given a secondary place is hard to understand. We admit that in this country we must have road construction before we can have road maintenance, but as we have seen it, a very large part of the road construction is re-construction on roads built a few years ago and in which little if any time or money had been spent for road maintenance. This re-construction is far more expensive and, moreover, leaves an inferior road during the major portion of its lifetime instead of the highly efficient road that is left where the split-log drag is properly used and which will not deteriorate in years.

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Make this theatre your family theatre

ALWAYS A GOOD SHOW



# The Utah State Fair

The Utah State Fair of 1915 brought together a greater display of the varied products of this state than has ever been shown at one time, perhaps, in the history of Utah. The value of the exhibits was greater, too, than at any previous fair, an idea of which may be gained from the announcement that the total estimated value of the livestock exhibit approximated the enormous sum of \$700,000.

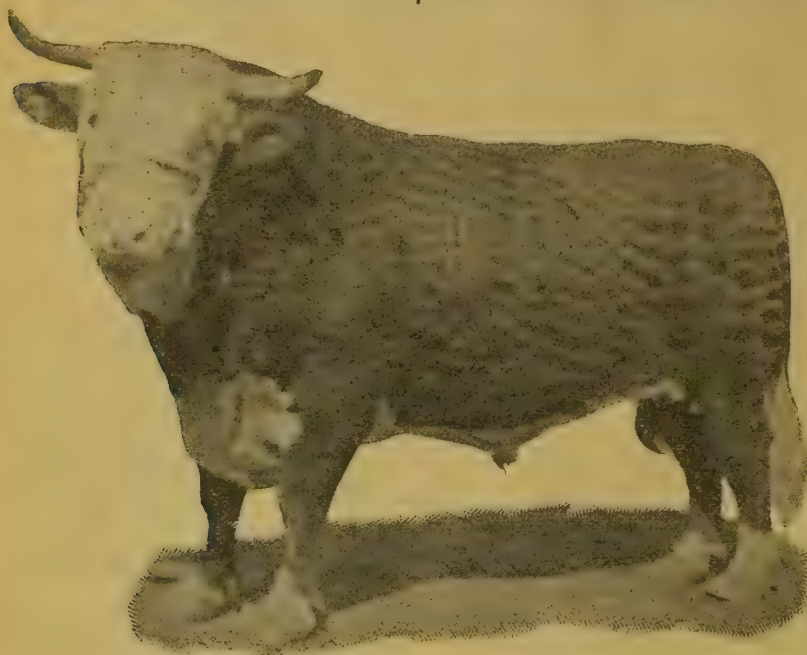
In the cattle barns 350 animals were shown, exceeding the number of last year's exhibit by 100. The sheep, swine and goats also exceeded those of last year in both number and quality, and the display of horses at this year's fair was a joy to look upon.

Among the cattlemen and dairymen who entered exhibits and the number and value of the entries are the following: Cannon Bros. Co., 14 head, value \$6,000; Smith Bros., Jersey

Levi Wolstenholm, E. G. Alvord, M. L. Bennion, J. H. Clinger, Edgar M. Ledyard, J. M. Ritchie, Douglass Cannon, Roosevelt Livestock Co., Louis Holley, Hugh J. Cannon, Mrs. J. W. Henry, Mrs. P. H. Nelson.

In the cattle exhibit there were Jerseys, Herefords, Ayrshires, Guernseys, Holsteins, Short horns, and fat cattle. Among the leading prize winners were Smith Bros. Jersey Farm; Cannon Bros. Jersey Farm; Olson Livestock Co.; H. L. Summers, H. C. Lookabaugh, Winterton Bros., L. R. Smith, E. G. Wooley, Jr., J. H. Seely, Nelson Bros., John W. Stubbs, F. H. Whittle, W. C. Winder, L. R. Smith.

The swine exhibit included hundreds of animals, representing the following breeds: Duroc Jerseys, Berkshires, Chesshires. The Richards Livestock Co. of Virginia, had a large exhibit of Duroc Jerseys, which oc-



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farm, 24 head, value \$11,000; Wolley Farms, guernseys, 8 head, value \$4,000; Winterton Bros., herefords, 13 head value \$8,000; Nelson Bros. holsteins, 16 head, \$10,000; F. H. Whittle, holsteins, 8 head, value \$4,000; J. W. Stubbs, holsteins, 9 head, value \$4,500; Verne Bartholomew, holsteins, 4 head, value \$2,000; J. H. Seeley, shorthorns, 40 head, value \$20,000; Hatch & Atkinson, holsteins, 13 head, value, \$3,000; Olson Live Stock company, 18 head, value, \$12,500; Roosevelt Live Stock company, 14 head Durhams, value, \$3,000; W. C. Winder, Jerseys, 17 head, \$4,000; Jake Smith, Ayrshires, 21 head, value, \$5,000; Ritchie Live Stock company, Herefords, nine head, value, \$4,500.

Among the excellent displays was that of sheep and goats, which was held in the sheep barn. Among the prize winners in this department were W. S. Hansen, J. R. Allen, Knollin and Finch and J. H. Seeley.

The horse exhibit included Percherons, Belgians, Clydesdales, English Shires, drafts thoroughbreds, standard runners and trotters, Shetlands, jacks and jennets. Prize winners were J. R. Allen, Richard Palfreyman, Hyrum DeWitt, J. W. McHenry,

cupied a prominent place in the swine pens and pulled down a goodly portion of the big prizes offered. Other prize winning hogs were shown by Edgar M. Ledyard, Olsen Livestock Co., M. S. Winder, C. P. Warnick & Sons, W. A. Boulter, Geo. W. Fairbourn, J. R. Allen, Manassel Smith, Earl Bennion, Simpson & Sons, A. L. McDonald, Ira Bennion, Spring Lake Stock Farm.

In the poultry exhibit the varieties were numerous and excellent. Among the prize winners were C. H. Baughman, J. W. Haslam, W. J. Coleman, J. H. Freeman, A. Betts, Beverly Farm, L. Brown, N. Haslam, Thomas Napier, A. Hampton, J. Baker, V. R. Madsen, G. J. Kidd, W. H. Voyles, T. E. Silva, S. Williams, H. Sessions, W. O. Ranshaw, Ernest Burham, W. F. Prues, Geo. O. Relf, W. N. Farr, William Oliver, W. H. Mann, A. J. Heath, and others.

The manufacturers building was a fair all in itself. There were shown products of home manufacture ministering to almost every need of mortal man, many of them in quality equal to any imported material.

The machinery exhibit included almost every implement ever produced for the benefit of the farmer and horticulturist, and dairyman, and oc-

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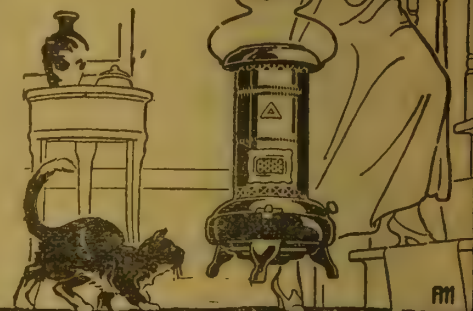
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# PERFECTION

## SMOKELESS OIL HEATERS

cupied a space in the center of the fair grounds not heretofore utilized. There were tractors, well driving outfits, cream separators, churns, etc., all labor saving and highly interesting.

The exhibit in the horticultural building was one of beauty and excellence. The fruits, grains, grasses and root products shown were truly a great object lesson in the possibilities of Utah's lands.

The school exhibit, fancy work, art department, fish and game exhibit, and in fact every display shown was educational and complete and worthy of the most intimate study by the student of Utah's possibilities.

Taken all in all, the Utah State Fair of 1915 was one of the most instructive and beneficial ever attempted, and the Fair Board and all officials concerned are entitled to the thanks and congratulations of every citizen of the state.

### DOCTORING STOCK

By Lemuel Fraser.

There is nothing to be dreaded more than to help give an animal a dose of medicine. No one seemed to know just how to go about it. The unfortunate beast was usually overcome by main strength, and the dose poured down its throat.

It is almost as important to know how to give an animal medicine as it is to know when it shall be given.

I used to hold the drenching bottle, or the nose-twitch, and the general awkwardness usually caused the drenchers to get more of the drench on their persons and clothing than went down the throat of the horse.

A drenching bottle is a necessity around the barn. It should be a long and slender bottle, with a long and slender neck. Be sure it is thick enough so it will not be easily smashed in the accidents that may occur.

When drenching a horse, insert the mouth of the bottle as far back into the mouth as possible, getting it between the cheek and the back teeth. Have the head of the animal about level, so the fluid will run back into the throat. Be careful about pulling the horse's head too high. If this happens, he will be unable to swallow, and will strangle, blowing and coughing the mixture out through the mouth and nose.

In drenching cattle, grasp the cow around the neck, and grip the muzzle with one hand. Lift the muzzle slightly and thrust the bottle back between the cheek and the back teeth with the other hand. The cow cannot help swallowing if this is properly done.

Maud—"Were there any marrying men down at the beach this summer?"

Ethel—"Yes; a couple of parsons and a justice of the peace."





## Water-Proof Your Harness

—By The Oil Philosopher.

Keep your harness from becoming dry and brittle, and prevent it from losing its toughness by insuring it against wet weather.

Keep the pores of the leather closed in winter and make your harness water-proof using.

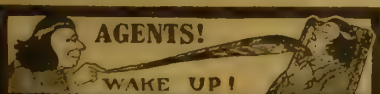
## Duck-Back Harness Oil

Water cannot penetrate leather when it is treated with Duck-Back Harness Oil. This is a natural oil for harnesses; it keeps the leather soft and helps it retain its original strength.

With the approach of fall and damp weather, you should have a good supply of Duck-Back Harness Oil on hand.

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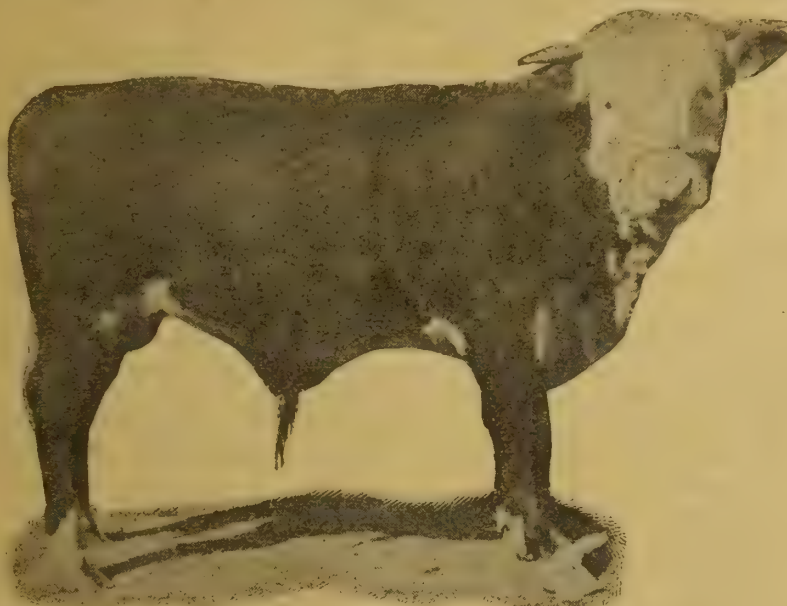
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SALT LAKE CITY, UTAH

## Some Prize Winners at Fair

The exhibit of Hereford cattle made by Olsen Bros. of Ephraim was one of the best at the fair. Two animals shown at the state fair won first prize in their class. The Olsen brothers are graduates of the Utah Agricultural College and when they went into the stock raising business they put into effect the principles learned in their college work. Protector 338493 one of the prize animals, won first in his class and in first graded herd; he is a grandson of Perfection, the bull that sold for \$9000. The other prize bull, Balmoral 10th, 502536, won first prize in his class, first in the calf herd and first in the young herd, and is the get of Anxiety 4th.

Senior Championship and grand championship. Last year she took special American Jersey cattle prize in the show class and for production, and has been a constant show cow right along. Her record for butter production is 704½ pounds in one year, the best month of which she averaged 3½ pounds of butter a day.

**Richards' Grand Champion Boar.**  
Defender, 164419, Duroc Jersey Boar, shown by Richards Bros. Livestock Co. of Virginia, Idaho, won the grand championship of the 1915 Utah State Fair. Defender is 17 months old, weighs 550 pounds, and is a son of Great Defender, twice grand champion of the International stock show



BALMORAL 10TH—No 502536.  
1ST PRIZE IN CLASS. 1ST PRIZE CALF HERD.  
1ST PRIZE HERD. GET OF ANXIETY FOURTH.  
OWNED BY OLSEN LIVESTOCK CO., EPHRIAM, UTAH.

**Winterton Grand Champion.**  
Mischief Maker, 509803, shown by Winterton Bros., Charleston, Utah, won the grand championship for Herefords at the State Fair. He is a splendid specimen and kept his exhibitors busy showing him to inquiring cattlemen. The Winterton Bros. also had a number of young animals on exhibition, which showed up well in their class.

**Jersey Grand Champion Bull.**  
Fairy Boy's Golden Jolly, 99955, shown by Smith Bros. Jersey Farm, was grand champion in the State Fair of 1914 and 1915, and used by first prize breeders' herd for 1913-14-15. Holds the world's record for state fair winnings with his get, winning 21 blue, purple and special ribbons at one show. Smith Bros. herd won 31 prizes in 1914 and 33 in 1915, most of the prizes being won with the get of this bull, which has been bred and raised by the Smith Bros. Jersey Farm. Last year they sold three of his bulls in three different states, every one being a first prize winner wherever shown. Smith Bros. have other bulls as good as these on the farm.

**Grand Champion Jersey Cow.**  
Mona's Antoinette, 238744, shown by Cannon Bros. Jersey Farm carried off many honors in this year's fair. She won the first prize in the cow class. Special prize for the highest score on show points and production.

held at Chicago. Great Defender sold for \$5,000.

The Richards company is running at present 50 registered sows and 250 registered pigs at Virginia, Idaho, and will breed 100 registered sows there this season. They also have several other imported Duroc Jersey herd boars besides Defender, the grand champion. The Richards hogs took all the first prizes at the Bannock county fair at Downey, Idaho, September 21-23.

### TAKING PAINS.

Dr. T. N. Carver, author and specialist in economics, gives this anecdote in an article on Taking Pains.

"There is a story of an aged savage who, after having lived in civilized communities most of his life, returned in his old age to his native tribe, saying he had tried civilization for forty years and it wasn't worth the trouble. Much of the philosophy of civilization is summed up in that remark. Civilization consists largely in taking trouble. Genius, in the individual, has been said to consist in the capacity for taking infinite pains in one's work. It is this capacity which marks the superior race as well as the superior individual. They who find the taking of pains too burdensome to be borne, will naturally decide that civilization is not worth the trouble. They who do not find it so very burdensome to take

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## The Grand Theatre

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Salt Lake City, Utah

The Grand Theatre opens its fourth week of Theatricals Sunday the 10th. This house has been enjoying the best of patronage since its opening and should as the Manager, Bert Christy, is giving the patrons of the house undoubtedly more show for the money than any house in Salt Lake. The house is playing Vaudeville and Pictures and the Admission is 10 cents. A new show every Sunday that runs the entire week. Make this House your Amusement Place when in the City.

## Empress Theatre SALT LAKE CITY

Week Beginning Sunday  
October 10.

THE ERNEST WILKES  
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pains, will naturally decide the civilization is worth the trouble, and will therefore become civilized.

This principle applies to every stage of civilization and progress. The greatest advancement is made by those who are capable of taking greatest pains."





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We believe that every advertisement in this paper is backed by a responsible person. We guarantee the reliability of advertisers, but we will not undertake to adjust trifling differences between subscribers and advertisers. This guarantee holds only when written complaint is made to the publisher within one week from the date of any unsatisfactory transaction, accompanied by proofs of swindle and loss and within one month of the date of the appearance of the alleged deceptive advertisement in the Utah Farmer, and the subscriber must prove that in writing to the advertiser he said: "I saw your advertisement in the Utah Farmer."

**OFFICIAL ORGAN**  
Utah Horticultural Society, Utah State Dairymen's Association, Utah State Bee Keepers' Association, Bear River Valley Farmers' Protective and Commercial Association, Agricultural College Extension Department and Utah State Fair Association, Utah-Idaho Millers' and Grain Dealers' Association.

When you ask for a change of address always give OLD and new postoffice address.

Getting rich quick or easy is the dream that puts many in the sucker class.

Let the sheep, hogs or cattle clean up the fields. They will find much to eat that would otherwise be wasted.

Be sure and do some hill selecting of potatoes for seed. It will pay, and pay big in the increased yield next year.

Do you have a record of each cow you are keeping? Are they paying you? Guessing will not tell. Keep a simple record of the amount of milk produced. Do not allow any boarder-cows on your farm.

Why don't we make enough cheese in Utah for our own supply. Think of a state with the resources we have importing tons of cheese. There is nearly as much profit in making cheese from milk as there is in making butter.

Did you ever use a worry book. Write down in a small book you can carry in your pocket, the worries you have today, in two weeks time read them again. You will find that many of your worries never happen. Don't anticipate trouble, wait until it arrives. It may not be near so bad as we expected. Try the use of a worry book.

Buy the make of goods advertised in the Utah Farmer. Remember we believe in fair play and are very careful that only reliable people advertise in this paper. This is a protection to you and you should help us and yourself by buying from the people who advertise in the Utah Farmer.

#### GOOD BOOKS WILL HELP

How many farm homes are buying first-class books, on live stock, grains, irrigation or home making. They are many and cheap today. Brain tools are needed on the farm today, even more than added machinery, yet how many are equipping themselves with good helpful books for the competition that brain-farming brings? Our service department will be glad to aid any of our readers in selecting books or securing books of any kind for our subscribers.

#### CULTIVATE CO-OPERATION.

The farmer has the name of being the most independent of men—in fact, he is said to be too independent for his own good. He will not co-operate as some other classes do and consequently he works at a disadvantage. But some farmers in our own country and in Europe have had the wisdom and courage to work together and in many cases have secured splendid results. Especially is this true in Denmark. Co-operative societies of all sorts have sprung up among the farmers there and are fast making them wealthy. Shall we not take a pointer and get busy?

#### MORE INTENSIVE FARMING.

The average farm in the mountain states is a small farm. It is also a high priced farm. And as time goes on it will grow still smaller and still higher in price.

Intensive farming is fast becoming a necessity. But intensive farming is impossible without an abundant supply of fertilizer to keep up the productive capacity of the soil. Where is it to be had? At present the answer is—from some kind of live stock—from poultry, hogs, sheep, or cows. Live stock has an essential place in our system of irrigation farming.

#### UTILIZE THE PASTURAGE.

Don't let pasturage go to waste. You will be surprised how much feed a bunch of sheep can pick up on a place after harvest. They clean off the ditch banks and eat out the corners and feed on all sorts of weeds, they pick up heads of grain and get a great deal from lucern stubble after horses and cows have fed it off. Hogs too can be used to glean fields, but they are harder to handle than sheep and must be kept out of beets and potatoes and other roots and garden

crops. But get something to utilize all your pasturage—it is almost clear gain.

#### GET BETTER COWS.

The average cow in Utah does not produce enough butter to pay for her feed on high priced irrigated land. It is doubtful that 200 pounds of butter will pay for her feed on such land and the average cow in our state produces less than 150 pounds. This means that many farmers are keeping boarders in the form of poor cows. They are parasites. Get better ones. We have dairymen in our state who have herds which average more than 400 pounds. Get this kind, there is money in them.

#### COW TESTING PAYS.

How long does a business man handle a line of goods that does not pay him a profit. Is there any reason why a farmer should keep a cow that does not pay for the food she eats. In Wisconsin the best cows are returning a profit of \$100.00 or more each year. Cow testing associations shows the money makers, also finds the loafers, the cows that consume more than they return. You can find the poor cows out and eliminate them, if you are a member of a cow testing association. The farmer should make it a straight business proposition, the keeping of cows and no farmer can afford to spend his own time or pay hired labor to milk cows which do not pay for their board. Test the milk, weigh it, and find out the value of a record. A cow testing association will help you.

#### WINTER EMPLOYMENT.

One reason why many farmers fail to "get ahead" is because they do not provide for continuous employment the year round. They work by "spells"—when the seeding season is on, or haying, or fruit picking, or beet digging—and then between times, and especially in winter, they are not engaged in profitable labor.

A farmer who manages in this way can no more expect to be successful financially than can the school teacher who does not work in the summer time. And some farmers are not only idle themselves in the winter time but they feed two or more idle horses. In such a system the profits of the summer are eaten up by the winter.

Every farmer should try to manage to distribute his labor as evenly as possible throughout the twelve months. Of course the winter can never be made as busy as the summer, but keeping some live stock—poultry, pigs, or good milk cows—might help to make the winters more profitable and might be the means of putting small farmers on the road to prosperity.

#### WARNING

This is the time of the year when many agents are out in the field soliciting subscription for papers. The Utah Farmer does not have any one out taking subscription at the present time and every one is warned not to pay money to any one not directly connected with this office. When anyone goes out for us they will have written authority and will be pleased to show it. We will thank you to tell us promptly where any one pretends to represent us who is not connected with this office.

Be careful about paying your money to solicitors who can not show best of credits. There are reliable men out working for papers but there are many who should be turned down and out. No first class paper sends out a man to collect unless they give him written authority. What we would like to see is something done to protect the people against there dishonest, fake solicitors. Some states have laws that control this difficulty. Warning—be careful about paying money out to strangers.

#### THE STATE FAIR.

The State Fair, which concluded a ten days' session in Salt Lake City on Wednesday last, was undoubtedly one of the best and most successful exhibitions of the agricultural, horticultural, livestock and manufacturing resources of the state ever held. In every department the displays were larger and more complete than at any preceding fair, and the racing and other attractions were all of a high order. Much credit is due the officers and directors for the high class attained in all exhibits, and for the excellent manner in which the fair was conducted.

One could not help but be impressed with the growing importance of this state in every direction that make for progress when gazing upon the products of the soil and Man's ingenuity and inventive genius in the many remarkable displays there shown. Irrigated products, dry-farm products, roots and fruits, were spread out in variety and abundance, while the mineral and machinery displays were such as to place Utah in the far forefront as a prosperous and progressive community. The attendance during the ten days was materially aided by the excellent weather which prevailed. The exhibits were viewed not only by thousands of the people of our own state, but also by many tourists going and returning to the expositions in California, and the impressions received of Utah's greatness by these citizens of other parts cannot but be helpful to this state.

Congratulations are in order for the Utah farmer, stockgrower and manufacturer for the excellent exhibits shown at the 1915 State Fair.



# "Home Product" Not the Only Reason

We don't ask you to buy Utah-Idaho Sugar merely because it is a home product.

The reason we mention Utah-Idaho Sugar as a home product is to let you know that your state puts out one of the finest food products on the world's market today.

There are but few sugars as good—none better. Don't take our word for it, try it; convince yourself, put it to any test.

It merits all the praise you can give it; tell your neighbor of its superior qualities.



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Enclose this ad. with your request

### ANSWER

The advertisements in this issue either list the best local dealer for them, if he does not carry them in stock he may send for them or you can write direct for catalogue and information. Don't forget to mention the Utah Farmer for we are back of every advertisement that appears in our paper.

# The Food Values of Milk

Prof. R. M. Washburn, University of Minnesota.

Of America's 2,250,000 annual baby crop, 66 per cent or 1,500,000, are bottle-fed. Two-thirds of our annual baby crop fed on cow's milk has eight times as great a mortality as is found in the other one-third.

In America we can feed pigs more scientifically than we do our men. The commercial necessity for authoritative knowledge on these subjects has led to a misappropriation of public funds and we now have thoroughgoing and conclusive investigation being carried on with the feeding of all classes of farm animals, the economical production of tobacco, beer and wine—substances which can be only detrimental to humans—while the investigation of the nutrition of milk as it applies to humans has been wholly neglected by every State agency. Milk values in the past have been based upon State or breed averages, and have not been based upon an investigation basis.

The cow is only a converter. She takes rough food which can not be digested by human agency and transforms it so that cow creates milk out of nothing. She can only make it out of what she takes into her system. A quart of Jersey or Guernsey milk naturally yielded is worth 50 per cent more than a quart of the average standardized milk offered on our city markets.

The whole American public is living under a delusion regarding the comparative nutritive values of various foods. Every food should contain the three essentials—ash, protein and energy. On this basis, skimmilk does not suffer in comparison with lean meat. It does not suffer in comparison with some of our vegetable foods, for instance—the radish is 97 per cent water, while milk is only 87 per cent. The same statement is true in a greater or lesser degree in many of our other vegetables, and it is to be remembered that the vegetable nutrients are not comparable in digestibility to the nutrients contained in milk.

When the American housewife pays 30 cents a pound for porterhouse steak, she is really paying 80 cents a pound for the dry nutrients. When she pays 20 cents for round steak she is paying 60 cents a pound for dry nutrients. Hamburger steak is more costly on a dry nutrient basis than is round steak or porterhouse; however, the cheap grades of hamburger, which usually contain more fat, are more valuable than those which are composed of the leaner meats and therefore sell at a higher price. Eggs which are reputed to be of exceptional food value contain 11 per cent waste in the form of shell and skin. Seventy-eight per cent of the remainder is water; therefore, when we pay 30 cents a dozen for eggs, we are paying \$1 a pound for the food nutrients contained in them. With oysters at 40 cents a quart, we pay \$2.50 a pound for the digestible nutrients contained in them. Ham at 25 cents a pound costs us 60 cents a pound for the food nutrients.

Certified milk at 15 cents a quart is cheaper as far as food values are concerned than 25-cent ham. Sanitary milk at 12 cents a quart is better than 30-cent ham. With skimmilk at 2½ cents a quart, the food nutrients—the essential body building substances—

cost the housewife but 14 cents a pound. If we should use the standardized milk offered on our city markets at 7 cents a quart, these same nutrients will cost 28 cents a pound. The average American does not realize these facts and growing children, are very often deprived of milk in order that they may have ham, beefsteak or other food articles which are not so suited to their diet as the milk.

Milk has been found to be not only the most digestible food but to be a helper in digesting other foods. Recent investigations in the composition of milk show that it holds certain digestive bodies that unlock the nutrients in other foods.

In a long series of experiments with young pigs carried on at the university farm, it has been found that if the food ration is richer than one unit of protein to every three of energy in the form of fat, sugar and starch, the pigs become too fat. Where the fat in the milk fed exceeded 3 to 3½ per cent, the pigs became over-fat. Such animals lacked stamina and vigor to such an extent that a nervous shock would often kill them. Pigs that got the richest milk, thereby becoming the fattest, had the leanest blood, in that it had the most water in it. In cases where the pigs received too many energy units in their ration, their livers became sluggish, clogged, bloated and whitish in color.

A long series of experiments was carried out with certain commercial brands of sweetened condensed milk that one being largely advertised as being prepared especially for baby foods. When the young pigs were fed on this material, they made extremely rapid gains for a short time, but there was always a slump later on. In all cases they became costive, due to a retarded condition of the liver and the digestive system. It was found there was not enough ash proportionately to secure the best results. Where these condensed milks were reinforced with calcium phosphate, the bones of the animals were found to be much stronger under applied breaking tests. The average gain in strength in the bones due to this reinforcement, in the case of nine pigs experimented on, was 54 per cent in fifty-two days.

For children under an age that will permit them to consume a variety of foods, milk containing from 3 to 3¼ per cent of fat is best suited. To water milk having a high fat content does not change its unsuitable character for child feeding, for the reason that the ash and protein content in all milk has a certain definite relation to the fat contained in that milk. Not only the common people of America, but the medical profession as well, are laboring under fallacies regarding infant feeding. Eminent authorities in the largest hospitals are beginning to acknowledge their ignorance and inability, which are due to the fact that human beings can not be used for experimentation.

She was very much in love with him, and one evening, while they were alone, she asked:

"Frank, tell me truly; you have kissed other girls, haven't you?"

"Yes," replied the young man, "but no one you know."



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## Questions and Answers

### HOG TROUBLES

Enterprise, Washington Co., Utah.  
Utah Farmer:

DEAR SIR:—I wish to ask a question about a little pig, and would be pleased to have you answer it through the Utah Farmer. We have a sow that has just farrowed a few days ago, and one of the pigs had a sore place on its head when it was born. It looked quite sore and red; it doesn't look so bad now, but it is swollen to the size of a walnut and seems to swell some every day. The pig seems to be doing as well as the rest of the pigs. The sow had nine, and three have died. She had eleven in March and raised ten. She is not doing or



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### Montana Livestock and Casualty Insurance Co.

Home Office

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O. ABEL

Lewiston, Utah.

looking as well as she did in the spring for some cause. She has been running in an alfalfa pasture since the 15th of April until a few days before she farrowed. We fed a little grain while in pasture. We have sixty-two pigs now, besides the six little ones.

T. T. ADAIR.

Answered by Dr. H. J. Frederick.

From the description of the pig you write about, it would be very difficult for me to say what ails it. It may be that the pig was not fully developed and possibly had a sore spot on the head as you describe. However, this should not interfere with any of the others or interfere with its mother. It very often happens that sows will farrow one litter and everything be O. K. but with the next litter there may be some trouble. Why this happens is difficult to explain. Sometimes the summer's heat causes considerable trouble in raising young pigs. From your description I would hardly believe that there is any contagious trouble affecting them and therefore no danger could be expected.

### COST OF FEEDING HOGS.

Draper, Utah.

Utah Farmer:

Has there been any experiment to know what it costs to produce hogs? How much can one get out of barley per pound when fed to hogs?

S. O. C.

Answered by Dr. W. E. Carroll.

It is impossible to answer either of these questions definitely without knowing the conditions under which the hogs are to be raised, the feeds used, and the price of the feeds. Hogs can be raised most cheaply on alfalfa pasture if given from two to three pounds of grain per 100 pounds of live weight.

Young hogs gain more for any given amount of feed consumed than do older hogs. Experiments have shown the following in this regard:

Wt. of pigs	Av. gain per day	Feed for 100 lbs. gain
lbs.	lbs.	lbs.
15 to 50	0.8	293
50 to 100	0.8	400
100 to 150	1.1	437
150 to 200	1.2	482
200 to 250	1.3	498
250 to 300	1.5	511
300 to 350	1.4	535

Other experiments have shown that on the average it takes 430 pounds of barley to produce 100 pounds gain in pigs. These pigs were practically mature when being fed. By the application of the prices prevailing in your locality you will be able to answer your own question.

### HEAVES.

Toquerville, Utah.

Utah Farmer:

I have a good horse ten or twelve years old, that has the heaves, and is quite bad at times, especially when he gets a little musty hay, which is not uncommon in baled hay. When he is in the pasture he is much better.

Please state briefly what causes

the heaves, and what, if any, is the remedy. Are the heaves caused by over pulling, or by eating bad hay? Please give me a simple remedy that will help him.

A. SUBSCRIBER.

Answered by Dr. H. J. Frederick.

Where an animal has a well developed case of heaves very little can be done to overcome this trouble. Green feed or pasture are probably the best kinds of feed for such an animal. Heaves is caused in a number of ways; it may be the result of an inherited weakness, or may result from over feeding an animal and working it extremely hard, or it may be due to feeding spoiled hay such as alfalfa for a great length of time and allowing the animal to have all it can eat. When this is first noticed the animal should be changed from such feed. We sometimes give an animal when first coming down with heaves, equal parts of lime water and linseed oil in one quart doses. This is given a number of times and then withheld for about a week and repeated if necessary.

Great care should be exercised in feeding horses affected with this trouble. They should not be fed or watered within two hours of the time they are put to work. They should be fed more concentrates such as grain instead of bulky feeds such as alfalfa hay, etc. If this is closely adhered to horses with heaves can be made serviceable.

### BOG SPAVIN.

Rockville, Utah.

Utah Farmer:

I have a Clydesdale mare colt 17 months old and weighs about 1000 pounds. About a month ago I noticed an enlarged hock which is soft both inside and outside of leg.

Colt is not and never has been lame and do not know of it ever being hurt. No change in the affected hock during the last month discernable.

Do not know of a Veterinarian within 200 miles, hence am writing you for information.

Is this likely to be Spavin? If so please give remedy if spavin can be successfully handled. Does spavin usually attack young animals? Thanks in advance.

DAVID HIRSCHI.

Answered by Dr. H. J. Frederick.

The condition you describe of your animal is undoubtedly a bog spavin. This affection very often attacks young animals, especially if they have descended from animals that are afflicted with this trouble. This is a weakness that is transmissible from parent to offspring. Where it affects animals when they get older, it may be due to severe exercise, hard work or pulling the animal too much and straining the hock. We sometimes apply a good blister to the enlargement. This acts by exerting pressure on the joint oil that has escaped from its natural sac, this oil forms the enlargement out on the side. By applying the blister it forces it back into place and sometimes overcomes the trouble if not too severe. If the animal is not lame as a result of bog spavin, I would not advise treating it as these conditions are quite difficult to overcome and unless they produce lameness, leave them alone. It will only blemish the horse, but will allow him to work without any trouble. A hock so affected is sometimes fired as a last resort. However,

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R. S. COLLETT

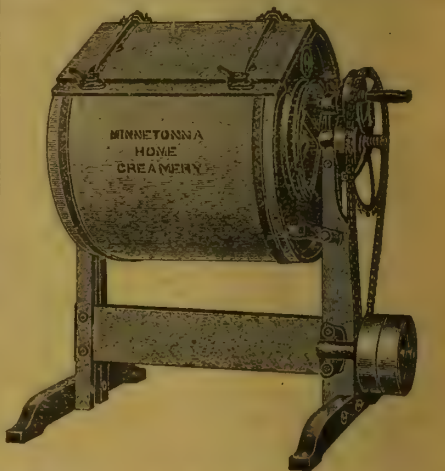
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Utah

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this should only be undertaken by a competent veterinarian and even then it is sometimes dangerous. Applying a blister a number of times very often reduces the enlargement and often overcomes the trouble entirely.

#### GAVE KEROSENE FOR BLOAT. Metropolis, Nevada.

Utah Farmer:  
Gentlemen:—I gave a yearling heifer kerosene for bloat and some of it evidently went on her lungs as she has a very bad cough and is gradually losing in flesh.

What can I do to relieve her?

Yours Truly,

S. M. WOOLF.

Answered by Dr. H. J. Frederick.

Where kerosene oil or any irritant is given to an animal, great care should be exercised in its application. In drenching an animal the head should not be reared back too far, but should only be held high enough so that the liquid will gravitate into the back part of the mouth and then be allowed to pass down the tube that leads to the stomach. It should be given slowly, allowing the animal time to swallow, then there is little danger of injuring such an animal. However, if the head is reared back and the animal forced to rapidly swallow the drench, trouble may ensue and if the material is of an irritant nature, lung trouble will usually result. In most instances very little can be done to overcome the trouble when lung lesions develop. However, good nursing and soft succulent feed should help to largely overcome this. Alcohol is about one-fourth pint doses two or three times a day well diluted with water would make a good stimulant and also aid the animal to withstand the affection.

#### SIMPLE METHODS OF KILLING HOGS

For the benefit of a subscriber who recently inquired about killing hogs, we wish to state that killing by striking the animals in the head with an ax has been practiced by us for years with good results and never a failure.

The blow should be given as nearly in the center of the head as possible, slightly above the eyes. A little practice will enable one to kill a hog stone-dead at a single blow, when it can be stuck with a knife in the usual way, severing the main artery in the neck, so the animal will bleed quickly and well.

Killing in this manner admits of profuse and thorough bleeding, so that all the bloodvessels of the body are completely drained of their fluid, the meat being left clean and stainless. Of course, if several blows are struck about the animal's head with the ax before it is killed; then its neck all haggled up in an attempt to stick and bleed it, results will be unsatisfactory, clots of blood being left at various points in the body and the meat thus having more of a tendency to spoil than where it is handled correctly.

Another excellent way to kill a hog is to shoot it with a small calibre rifle (22 or 32 ball), aiming for the shot to take effect at the same point as when the animal is struck with an ax. The admirable part of this method, is, that it is more certain, consequently quicker and more humane than by the ax if one is a good shot. Also, there is no crushing of the bones nor bruising of the flesh as with the ax. Again, we have seen the man with

the ax miss the vital spot; then comes the unpleasant task of chasing the half-killed animal which, being alarmed at the pain of the attack, often will not cease struggling and squealing till silenced by a succession of blows, aimed while the poor brute is on the move, or while someone holds it still.

### Markets

The local wheat market is looking up a little, according to wholesale dealers, and the price is quoted now at \$1.45 per cwt. F. O. B. Salt Lake City, the tendency of wheat is slightly upward, due to the strong demand in Chicago for western wheat. For the other grains, the average is maintained, although the supply is plentiful.

Alfalfa is in good demand, and is a little higher than a couple of weeks ago.

The quotations given below are F. O. B. prices in Salt Lake City:

Wheat—\$1.45 cwt.

Oats—\$1.25 cwt.

Rye—\$1.20 cwt.

Barley—\$1.00 cwt.

Alfalfa—Baled, \$11 ton.

Timothy—Baled, \$13.50 ton.

Potatoes—70c cwt.

#### Chicago Grain.

Wheat—December, \$1.01½; May, \$1.02½.

Corn—December, 56½c; May, 57½c.

Oats—December, 36½c; May, 38½c.

#### Livestock Quotations.

##### Kansas City.

Hogs—Higher, Bulk, \$8.00@8.47½; heavy, \$7.90@8.45; packers and butchers, \$8.00@8.50; light, \$8.00@8.50; pigs, \$7.25@8.25.

Cattle—Steady. Primefed steers, \$9.75@10.25; dressed beef steers, \$8.00@8.65; western steers, \$6.50@9.00; stockers and feeders, \$5.50@8.00; bulls, \$5.25@6.25; calves, \$6.00@10.25. Sheep—Higher. Lambs, \$8.25@9.00; yearlings, \$6.25@7.00; wethers, \$5.75@6.50; ewes \$5.25@6.00.

##### Portland.

Steers—\$6.85.

Cows—\$5.00.

Heifers—\$6.00.

Calves—\$7.50.

Hogs—\$6.40.

Lambs—\$7.00.

Ewes—\$5.00.

##### Los Angeles.

Beef Steers, \$6.75@7.25; stock feeders, \$5.25@5.75; calves, \$8.50@9.00.

Hogs—Heavy, \$5.75@6.00; average \$6.50@7.00.

Sheep—Prime wethers \$5.75@6.25; yearlings, \$5.50@6.00.

#### ADVANTAGES OF DAIRY FARMING

The advantages of dairy farming are so many, the profits to be derived are so great, and the future of this branch of farming is so full of promise, that the young people who contemplate farming cannot do better than take up dairying, and the old people who have had a struggle to make both ends meet, should turn to the dairy cow as a means of salvation.

One of the first advantages is the fact that dairying brings in a constant income every day in the year or every week in the year and the farmer can depend upon it.

Second, dairying offers a source of constant employment in contrast to other branches of farming wherein a man has certain busy seasons and certain times of enforced idleness. The dairyman has his certain work

# PIGS AND MEN



## Electric Motors For Feed Grinding

Pigs, cattle, sheep, and horses thrive best on GROUND FEED. Imagine a pig gaining 42 per cent faster in weight on ground feed than the same sort of a pig fed on ordinary food.

Yet this is exactly what happened at the Agricultural Experiment Station of the State of Nebraska, where an experiment ran for 84 days on two lots of pigs of ten each.

## PIGS and MEN

—is the title of a little booklet we have just issued on the subject of ground food for livestock. It tells you what several prominent livestock growers in Utah have accomplished by using ground food—and how economically they grind their feed by using electric power.

"Pigs and Men" is yours for the asking, and you will find it mighty interesting from cover to cover.

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to do each day. The employment is not only constant but it is remunerative.

Third, dairying offers excellent opportunities for the exercise of skill and brain. The building up of profitable dairy herds, the scientific feeding to obtain the greatest quantities of milk or of butter-fat, the most profitable handling of the product; all of these tax a man's ingenuity and afford him ample opportunity to display his business ability.

Fourth, dairy farming takes less fertility from the soil than any other kind of farming. In selling \$1,000 worth of wheat, there will go with it \$240 worth of fertility; in \$1,000 worth of beef, \$85; in \$1,000 worth of pork, \$60, in \$1,000 worth of horses, \$35; and in \$1,000 worth of butter, only \$1.25 worth of fertility. It will be seen that butter carries away practically no fertility. Separating the milk on the farm gives the skim-milk directly back to the live stock, and through them back to the soil, thus increasing the fertility and multiplying the salable products of the farm.

Fifth, the dairy products are easily marketed, because they are in reality condensed products. The dairyman actually condenses the tons of farm crops produced on the farm into compact products, cream and butter, which are easily portable.

Sixth, no kind of farm work is better suited to women and children than dairying. They can take an active part and it is not the old-time back-

breaking, discouraging drudgery which we have always associated with farming.

Seventh, dairying is one of the most progressive branches of farming. It is only within recent years that the cream separator, the Babcock test, and other improvements have been given the dairyman. We might say that dairying is still in its infancy. If this industry gave us last year products to the value of nearly \$800,000,000 when the cows produced an average of only 3,500 pounds of milk annually, it is reasonable to assume that the future will witness a development which should practically double the value of dairy products.

Eighth, dairying pays as good profits as in almost any other branch of farming. This in itself should induce farmers to take it up more extensively.—"The Golden Stream." I. H. C.

When things have gone against you, do not say: "That is just my luck," "I am always getting into trouble," or "I knew it would be so." Don't pity yourself. Keep your mind-slate clean. Have nothing more to do with your mistakes or your short comings. No matter how bitter they may have been, blot them out. Forget them and resolve never to harbor them.—Marden.

Mistress—"Why have you put two hot water bottles in my bed Bridget?"

Bridget—"Sure, mum, van of thim was leaking, and I don't know which, so I put both in to make sure."



## THE HOME

### POTATO DISHES

#### Baked Potatoes

A good baked potato is one of the favorites among foods, but for people in general it is one of the very hardest things to get. With just salt and cream, or even milk, it is one of the prime delicacies among vegetables.

Some people merely oil the skin of a potato when putting it in the oven to bake.

A great many people like the skin of a baked potato if it is not too brown or black, and when a new potato is not too watery to bake the skin is the most delicious part.

#### Baked Boiled Potato.

One way to secure baked potatoes the skin of which is attractive and good to eat is to boil the potatoes for fifteen minutes, then bake them until done. The boiling heats them through quickly, and a six or seven ounce potato will then bake in half an hour in a moderately hot oven. When it pinches up soft cut a two inch long gash lengthwise and another at right angles to it across the top, pinch twice diagonally across the top if you wish to serve it hotel style. After it is cut open in this way it can be left in the oven, with the door open, for five or ten minutes without great harm. The boiling of the potato changes the flavor slightly, but only the very critical would notice it. When potatoes are put straight into the oven to bake it is a good plan to prick them first a few times with a two tined steel fork. The finest baked potato is one baked in hot ashes.

#### Leftover Baked Potato.

Break open or prick potatoes when they are just baked, otherwise they are likely to be soggy. Peel and cut up baked potatoes in good sized dice and heat up in hot cream with a little seasoning. This might be called "bachelor's favorite," for it is a bachelor's recipe and praised to the skies by him.

#### Delmonico Potatoes

To each pint of cold boiled potatoes cut fine, allow one cup of cream, two tablespoons of butter, one teaspoon of salt and one-quarter of a teaspoon of pepper. Season the potatoes with the salt and pepper, put them into a shallow baking dish, which has been greased, pour over them the cream, then the melted butter, and brown in a quick oven.

#### Irish Potato Puff.

Boil a half dozen medium sized potatoes. Drain water off when potatoes are done and mash fine as possible. Add a cup of hot milk a tablespoonful of butter, salt and pepper to suit taste, beat well and add one at a time the yolks of three eggs beating all the time till each one is beaten in, then add a pinch of salt to the whites beat to a stiff foam and fold them into the mixture. Bake fifteen minutes in a well greased baking pan in a hot oven. Serve hot.

#### Potato Croquettes.

To a quart of mashed potatoes add a tablespoon heaping full of finely chopped onions, beat in the yolk of one egg, season mixture with salt and pepper, roll into balls and dip in beaten egg then roll in cracker crumbs and fry till brown.

#### Brown Mashed Potatoes.

Mash and season potatoes in the usual manner; beat till they are nice and light, heap them upon a dish and brush with the white of an egg beaten lightly and set the potatoes in a hot oven until brown; and serve piping hot.

Do you know potato crullers are very good and easily digested as they do not absorb the grease? Here is our recipe: One pint mashed potatoes, one cupful of sugar, heaping tablespoonful of butter, two eggs well beaten, one cup of sweet milk, pinch of salt flavor to taste. Two heaping teaspoonfuls of baking powder. Mix dough rather stiff. Fry in hot fat.

#### Mashed Potato Solad.

Mix evenly together two cups of smoothly mashed potatoes, three-quarters of a cup of firm white cabbage, chopped fine; two tablespoons of chopped cucumber pickle, and the yolk of a hard boiled egg pounded to a powder. Now heat to boiling half a cup of vinegar and stir into it a tablespoon of butter, a teaspoon of sugar, a pinch of salt, and one of pepper. Mix and stir over the fire for a minute before beating in a raw egg whipped light. Wet a teaspoon of flour with cold vinegar and stir in last of all. Cook the mixture, stirring and beating all the time, until it is of the consistency of thick cream, and pour scalding hot upon the mingled potato, cabbage and pickle. Toss with a silver fork to incorporate the ingredients thoroughly, and set aside until perfectly cold. Serve heaped irregularly upon lettuce leaves. It is fine.

#### Fried Potatoes.

Fry out enough pork to make two or three spoonfuls of fat, which is enough for a whole frying pan full of potatoes if the cooking is carefully done, and much more than this will make the potatoes greasy. Peel and slice potatoes, put them in the frying pan, cover, and let cook for eight or ten minutes, then turn with a cake turner and brown them on the other side. Fry till tender. If the potatoes are sliced very thin it will not take more than fifteen minutes to cook them, and only a small amount of fire.

#### Delmonico Potatoes

Melt  $\frac{1}{4}$  pound grated cheese in  $1\frac{1}{4}$  cups white sauce. Arrange diced, cold boiled potatoes and white sauce in alternating layers in buttered baking dish. Cover with buttered crumbs and bake until brown.

#### Potato Nuts.

One pint toasted bread crumbs, rolled fine, one pint mashed potatoes, one pint chopped nut meats. Season with salt, pepper, sage and mace, if desired. Dissolve two teaspoons baking powder in the yolks two eggs, beat all together. Form into small cakes, dip each cake into the whites of the eggs, then into shredded coconut and brown in a frying pan containing a little pork fat, not deep fat. Turn and brown on both sides.

#### Riced Potato.

Boil pared white potatoes in slightly salted water. Add white pepper, and run through potato ricer.

#### Creamed Potatoes.

Boil in their jackets, peel while piping hot, mash with pepper, salt, half



## The Drink that keeps STRONG MEN STRONG

Ghirardelli's Ground Chocolate is an inimitable blend of finest cocoa and pure sugar.

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a cup butter and half a cup very rich, sweet cream to the quart potato. Creamed potatoes and riced potatoes may be served with other vegetables with any course dinner.

#### Escalloped Potatoes.

Pare and slice a dozen medium sized white potatoes, fill pudding dish with alternate layers of potatoes and finely rolled toasted bread crumbs. Season each layer as it is inserted, with raw sliced onion, salt, pepper (with mace and sage if liked) and butter size of an egg for each layer. Cover the whole with thin sweet cream or very rich milk. If cheese is liked, sprinkle the top with cheese crumbs, and cheese may be added to each layer. Bake in slow oven, in dripping pan, removing lid to allow the top to brown well towards the end of the baking.

#### DIXIE RELISH

One quart chopped cabbage, one pint chopped white onions, one pint sweet red pepper, one pint green pepper, five tablespoonfuls salt, four tablespoonfuls mustard seed, two tablespoonfuls celery seed (crushed), three-fourths cup sugar, one quart vinegar.

Soak the peppers in brine for 24 hours (one cup salt to one gallon water). Freshen in clear, cold water for one or two hours. Drain, remove seed and coarse white sections. Chop the vegetables and measure before mixing. Add the spices, sugar and vinegar. Let stand over night in a covered crock or enameled jars. Process for 10 minutes in a hot water bath.

#### NO WASTER.

"Urry on, please!" urged the guard. The stout old lady struggled to enter a narrow carriage-doorway, but struggled in vain.

"Urry on there!" yelled the guard, approaching her with fire in his eyes. "Urry on! Git in edgeways, mum! Git in edgeways!"

The would-be traveler showed a red, perspiring face over her plump shoulder, and regarded the official with an angry glare. "An' wot," she snapped bitterly ceasing her endeavors for the moment, "Wot if I ain't got no edge?"

"Sadie, what is a gentleman?" "Please, ma'am," answered the well-bred child, "a gentleman's a man you don't know very well."



## Pattern Department

Full directions for making as the quantity of material required, accompany each Pattern. Price of each Pattern, 10c; no extra charge for postage. When ordering, all you have to do is to let us know your name and address, the number and size of each Pattern you want, enclose 10c for each pattern, and address all your orders to: PATTERN DEPARTMENT, THE UTAH FARMER LEHI, UTAH.



7422—Children's Dress. Cut in sizes 2, 4 and 6 years. The dress closes at the back and is box plaited.

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6867—Girl's Apron. Cut in sizes 4, 6, 8, 10 and 12 years. The sleeves extend to the neck edge.

Price of any of the above patterns 10 cents each.

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Pattern No. .... Size or Age. ....

Pattern No. .... Size or Age. ....

Name. ....

Town. ....

I enclose (c) R.F.D. .... State. ....

(To pay for same)

## HOW TO MAKE BREAD.

Katherine Jensen.

**Single Loaf:** It has been found most satisfactory to bake the bread in single loaf tins instead of baking 3, 4 to 6 loaves in a single large tin. A pan with the dimensions 8.5x3.5x3 inches is quite satisfactory. A loaf to fit this tin will bake in 45 minutes.

**Flour:** Flour when in its best stage for baking (a few months old), should be granular in feel, creamy white in color and sweet in flavor. Winter wheat flour must be handled differently from spring wheat flour. When bread is made from the winter wheat flour the dough is made quite soft and is not allowed to rise to double its bulk.

**Liquid:** With spring wheat flour a moderately stiff dough gives the most satisfactory bread. Water produces an inelastic bread, fine in texture, sweet in flavor but one which dries out quickly on keeping. Milk increases the lightness and elasticity of the crumb and especially the keeping qualities of the bread.

**Yeast:** The yeast should be used while in a healthy, active growing stage. When the yeast begins to lag the souring bacteria begin their work. It seems best to carry the liquid yeast in potato water.

**Salt:** The proper proportion of salt (one teaspoonful per cup of liquid), improves the flavor of the bread and the tenderness, elasticity and the texture of the crumb. Too much salt makes the crumb tough and moist, gray in color and poor in flavor and texture.

**Sugar:** The proper proportion of sugar (two teaspoonfuls to cup of liquid) improves the flavor, elasticity and moisture of the crumb. Too much sugar makes the crumb tough, moist, coarse in texture and poor in color.

**Molding:** The most satisfactory bread is produced by molding the dough lightly into a loaf with the least kneading possible.

**Rising:** Chilling the dough lessens the volume and gives a compact bread with a tough crumb and coarse texture.

### RECIPE FOR DILL PICKLES

Take medium-sized cucumbers. Let them stand in water over night or 24 hours. Remove, wash, and dry. Put grape leaves on the bottom of a stone jar, then pack in a layer of cucumbers very solid and cover with dill and cherry leaves. Repeat this process, being sure that the cucumbers are packed in solid and that plenty of dill is used. When the jar is full, cover with dill, cherry leaves, and grape leaves; some horse-radish may be added. For a 2-gallon jar mix  $\frac{1}{2}$  cup coarse salt, 1 cup vinegar, and 1 gallon of water until the salt is dissolved. Pour over the cucumbers, place a plate on top and a weight on top of the plate. It is essential that cucumbers be held down solid. Do not put into a cool cellar for 10 or 12 days. Remove pickles as needed, replacing weight each time.—Department of Home Economics, Nebraska.

"Jane, what time is it?" called down her irate father.

"I don't know, pa. The clock isn't going."

"But I am," spoke up the young man, who could take a hint.



## A GOOD LAMP BURNS ITS OWN SMOKE

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RAYO lamps are gracefully designed and built to last. They are easy to clean and easy to rewick. Dealers everywhere carry the RAYO.

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has displaced the drudgery of home baking. All members of the family agree, when they taste Royal Table Queen, that it is well worthy its name.

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**An Honest Bread at An Honest Price 100% Pure**

**Royal Baking Co., Salt Lake City, Utah**

"Struck a barber yesterday who didn't want to talk baseball or war or prize fights or horse racing."

"His address, please?"

"It was a lady barber."



# Transplanting Trees

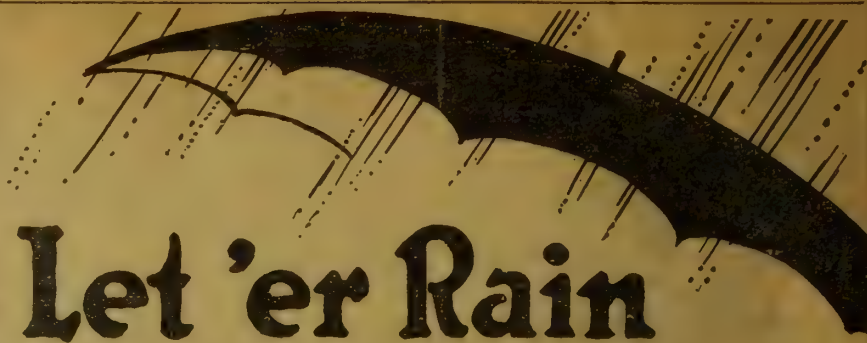
Prof. H. Ness.

Deciduous trees can be transplanted any time during the dormant season, preferably in the early part of that season. Evergreens are transplanted with greatest safety in the spring, just as their buds commence to show revival of growth. It is necessary to dig large holes for the trees if the soil be poor and if previous and refill them with good, mellow soils. It is especially necessary that the soil be porous enough to admit plenty of air to the roots, since, if lacking in this, wounds on the roots are liable to fowl instead of heal; hence the fine-grained soil may be improved by mixing with it coarse or gravelly sand. No quickly acting or fermentable manure should be used in the holes, as the action of the manure may cause decay in wounds of the roots. Furthermore, the newly transplanted tree can make no use of extra soil fertility until it has put forth its leaves. Slowly acting manure such as raw bones, either crushed or ground, may be used with benefit in the soil at planting time. When the tree has commenced to grow and is setting vigorous shoots, stable manure may be given as a top dressing. When the heat and drouth of the summer are approaching the soil around the tree should be put in good tilth and covered with a mulch of hay, straw or similar materials. This mulch should be heavy enough to prevent any grass or weed from the surroundings growing through and sufficient in area to exclude the influence of the grass if the ground be a lawn. The effect of such mulch will be to protect the soil in which the roots of the tree are feeding from sudden and injurious drying, and at the same time lower the excessive temperature, which, to the tree, is fully as destructive as the lack of moisture. A soil, so protected, is also benefited in many other ways; its pores are kept open and not closed by puddling rains; its soil-nitrogen is kept on the increase, because the nitrifying bacteria are not hindered in their activity by extreme conditions and the decomposing mulch adds to the humus and to the general fertility and good texture of the soil. No young tree can be expected to thrive on a lawn covered by grasses, since all grasses, especially perennial runners like Bermuda grass, are enemies of the trees and the trees of the grasses—a fact that can easily be observed where the two classes become close neighbors. For this reason it is advisable on all lawns, especially where the soil is lacking in moisture and fertility, to keep the trees heavily and extensively mulched until they are large and robust enough to subdue the grass.

Another very important factor in the beauty and thrift of ornamental trees is the training and nursing which they receive during their early years. Many people plant a tall switch without pruning it back into proportion with the roots, which have been seriously reduced and injured by transplanting. Some people even cut off the lateral limbs, thus turning the tree into a switch crowded with drying and blistering scars due to the removal of the branches. The proper way is to cut well back, both the top and the branches to strong, promi-

nent buds, and thus concentrate the action of the sap on these to produce a quick and vigorous start. The young tree must be put in condition to quickly renew its conductive tissues, that is, new sapwood and new soft bast, because the old tissues have hardened and their conductive power has been reduced by the transplanting. In a newly planted tree the sap exerts but little pressure and seeks an outlet for new growth and new channels as low down as possible, refusing to be forced to any great height, especially if it has to pass by knots and wounds, or through a crooked course. Such obstacles should be avoided by proper pruning back, at the time of transplanting. The deciduous ornamental trees should, as in the case of the fruit trees, be headed so low that the stem is shaded by the foliage of its crown during larger part of the midsummer day. As the crown increases in spread and density a few of the lower branches may be removed each season until the trunk has received the desired height. To avoid heavy amputations during this training of the tree it is only necessary to retard the growth of the limbs destined for removal by pinching back their growing shoots from time to time. This pinching will also have the effect of increasing the growth in the unpinched branches. The symmetry of the crown can also be maintained by this same method, and heavy pruning with a knife or shears be avoided. In a large number of our conifers the best ornamental effect is obtained by not removing all branches from the trunk, but leaving it covered to its base. Those most adapted to this form are evergreens producing their branches in close whorls and in which the length of the branches decreases regularly from the base to the top, thus giving the tree the form of regular cones. The principal species of this form are the true cedars, Cypressus, Auracarias, etc. Even in these trees pinching may sometimes be resorted to in order to preserve the symmetry, because lateral branches may occasionally assume the importance of leaders unless held in check.

To obtain the best results from ornamental planting it is necessary that the trees be selected in the nursery. It is obvious to anyone who has paid even a slight attention to the growth of forest trees that they vary individually within the same species. This variation extends to all characters and will be even more marked under cultivation, because there the growth and development is less impeded by the surroundings. This variation is especially marked in certain genera; for instance, in the genus that includes the oaks. In order, then, that the planter may obtain that pleasing uniformity that is so necessary to beauty, for example, in avenue planting, he must select his trees in a nursery where the choice of individuals is abundant. So, too, if he wishes to obtain new and unusual forms for any purpose such as umbrellas or weeping forms, etc., where the general forms are different, he may find them in the same species, if his collection of individuals be large enough. Frequently, when such new and unusual forms are segregated in



Fall rains won't interrupt the work if you have a Caterpillar Tractor. Its long, wide endless track doesn't pack moist ground as round wheels do—doesn't slip or mire in the soft places. Get a Caterpillar now and plow when horses and round-wheel tractors are idle. Use it 200 days a year instead of 75.

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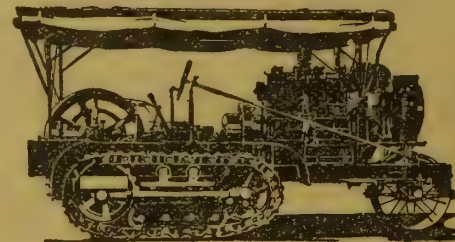
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The Caterpillar today is much stronger and simpler than the old 1911 and 1912 models. 5 pieces in the track unit where it took 25 three years ago—stronger frame—all cut-steel gears in dust-proof cases—scores of important refinements.

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Salt Lake City, Utah

cultivation, they prove able to transmit their peculiarities to their descendants. All our stable varieties of ornamental curiosities have arisen in this way, and they are by no means few. The larger number of them are, however, propagated by grafting or cuttings, to insure them against further variability.

From these considerations it is evident that where a city or a town is extensively engaged in ornamental planting, a nursery in charge of an expert should be adjoined to furnish materials for the specific purposes. To this I will further add that a school where agriculture is taught can find no instruction in that science more practical and more effective than the care of a small nursery of both fruit and forest trees. In such a place plants are handled individually and thus a much more intimate knowledge of their nature and needs is needed than from crops handled in mass.

## WHY AND HOW TO CURE SEED CORN

By John Klinka.

The first requisite for a good crop of corn is good seed secured from a crop that was grown in your locality. Too often we depend upon imported seed which invariably brings disappointing results for several years.

Seed corn should be selected, as far as possible and practicable in the district in which it is to be grown, and about a week before the first killing frost is expected. The careful corn grower will go through his corn field and select his seed corn. If the

corn is fairly well matured a light frost will not hurt the husk covered ears but they should be picked, husked and put to fire drying the day following the frost.

The first test to apply to seed corn is maturity. In the northern part of this state where every day must be utilized for ripening a crop the question of getting seed that has matured in our latitude is of prime importance. We want a corn that will mature nine years out of every ten and this corn can best be secured from our own cornfields by selecting the best matured ears one week before the usual time for the killing frost. We want to raise large corn and get big yields per acre but maturity must not be sacrificed for size.

Having made our selection of about double the amount of corn we expect to plant our task is by no means completed. The ears, if left only over night when the weather is damp, will become covered with molds which will germinate and produce more spores or mold seeds which will become parasites and feed upon the young plants when the seed germinates the following spring.

As soon as the seed corn is picked it must be cured. Many devices have been used for drying seed corn. The most common of these are single string, double string, corn tree, frame covered with chicken wire and boards into which finishing nails have been driven. In the last method the seed ears are jabbed onto the nails. This device has the advantages over the others. It is inexpensive and easily made. When the corn is tested in



spring the ears can be numbered very easily by writing the figures on the boards below the ears.

The curing of seed corn is dependent upon two conditions, — a free circulation of air and a temperature above freezing until the corn is thoroughly dried. These conditions can best be secured by fire drying. Open the windows in the room in which the corn is stored and build a fire every day until the corn is thoroughly dried. After it has been thoroughly dried freezing will not injure its vitality and if it is kept in a dry place where it will not absorb moisture it will make the best seed corn that you can secure for your farm.

#### MAKE YOUR FARMS PRODUCE MORE.

W. A. Henry and F. B. Morrison.

The animals of the farm should be regarded as living factories that are continuously converting their feed into products useful to man. A fact of great economic importance is that a large part of the food they consume is of such character that humans can not directly utilize it themselves. Among the products yielded by the farm animals are not only articles of human diet, such as meat, milk, and eggs, but also such materials as wool, and hides, which are needed for clothing and other purposes. Another product of greater aggregate money value than any one of these is the work performed by horses and other draft animals. Altogether, the farm animals of the United States yield each year produces work over \$5,000,000,000, a sum nearly as great as the value of all the crops annually harvested on our farms.

As the population of our country becomes more dense most naturally and properly a smaller portion of the crops raised will be fed to animals and a larger part consumed directly by humans. This change must come with the increased demand for human food, since even high-producing animals are able to convert only a part of the feed they eat into food for our consumption. Accordingly, with our increasing population, we should expect the census statistics to show that the number of animals on our farms was falling in some small degree to keep pace with the increase in people. The actual decrease in farm animals compared with population is, however, surprising. While the population of the United States increased 21 per cent during the decade 1900 to 1910, the number of cattle and sheep decreased, and the number of swine increased but slightly. This indicates that if animal products are to hold their present important place in the diet of our people, American farmers must more thoroughly appreciate the basic advantages of stock farming and better understand the principles and methods which are essential to its success.

Lured by the high prices which have ruled for grain and other crops in recent years, many farmers all over the country have sold their crops for cash, rather than following the wiser plan of marketing a portion through the feeding of live stock, and thereby maintaining a balanced agriculture. Seldom have they realized that with every ton of grain thus sold they are removing from their farms \$7 to \$8 worth of fertility. The loss through such mining of the soil is

gradual, but in a comparatively few years there will result none the less surely worn-out fields, lacking in plant food and humus, which must ever afterwards be fed with fertilizers to secure fair crops. On the other hand, if a part of the crops are fed to live stock and proper care taken of the resulting manure, most of the fer-

tility may be retained on the farm, and the need of commercial fertilizers long delayed. Under intensive stock farming, where more or less milling byproducts rich in fertilizing constituents are usually purchased and fed on the farm, the land will even become richer and more productive year by year.

#### HE WASN'T FOREMAN.

Foreman Builder—"Now then, you hurry up, can't yer?"

Laborer—"Orl right boss; Rome wasn't built in a day."

Foreman Builder—"No, p'raps not; but I wasn't foreman o' that job."—  
Collier Men.



## Connecting the Towns

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Likewise, without Long Distance connections, it suffers a severe handicap in its commercial and social relations with other communities.

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In the very nature of our business, and under our charter obligations, it is the duty of this company to afford facilities for Long Distance communication, so far as our ability may permit.

We must do this, notwithstanding that the towns are often separated by rugged mountain ranges, and the cost of construction and maintenance is enormous.

And every town connected helps to round out our system, thus adding to the value of the service.

## The Mountain States Telephone & Telegraph Co.



## Beautifying Home Grounds

The farm house is the center of the home life of the farm and should be given the greatest prominence. It should be set back from the highway far enough to give privacy, but not so far as to denote seclusion. A distance of 120 to 150 feet would give a nice stretch of lawn to the front.

Arranging the farm buildings proves difficult, because each is different and has peculiarities of its own. The most common mistakes occur in locating buildings as to convenience. For example, the corn cribs should be near the feeding place which requires the most of its supply. The watering trough should be centrally located. As to the general farm buildings, they should be close enough for convenience and yet far enough away to avoid odors being carried to the house by the prevailing winds. If possible they may be made to serve as a partial windbreak.

A word about driveways. The less drive space the better. They are for utility and should be direct, although not necessarily straight as a gentle curve often lends a degree of beauty without marring the utility. It is sometimes desirable to have two drives, one serving the house and another for a service drive, leading directly to the barn yard at some distance from the house. If the drive is located as it should be and constructed of some durable material, as crushed rock, gravel or cement, there need be no front walks, as in the country the majority of the people ride rather than walk. Back walks may be located where they are needed and should be direct and few as possible.

The main entrance may be indicated by attractive stone posts of simple design. One of these should display the farm name. I think every farm should have a name, for it not only gives individuality to the place, but also is an advertisement for that particular farm. A few states, have a law permitting the registration of farm names. This name needs be the mark of distinction on the farm. Such features as billboards and advertisements on the barn, tobacco signs for instance, should be eliminated from the premises as they are very cheapening.

The finest materials for beautifying the farm home are the hardy trees and shrubs. Their value as an investment can hardly be overestimated and every home, whether it be in the city, town or country, should have an abundance of these beauty making plants.

In treating the ground with plants the first requirement is a good lawn, thoroughly made and carefully tended. With the lawn as the canvas and the plants as the colors, we can make our picture. First, put vines on the porches and window boxes to balance. Then groups of small flowering shrubs in the angles and by the steps and corners of the house. If this is done skillfully an old house may be made very attractive.

The lawn should be bordered with hardy trees, shrubs and flowers. These borders may be of straight trimmed hedges, but the best effect is obtained by arranging a number of varieties of shrubs in irregular masses, planting the taller kinds at the back and the lower ones to the front. The main portion of the lawn should be left free of plants.

The house should not be hidden with trees, as many farm houses are found today. Fresh air and sunshine are barred in this way and the place becomes unhealthful. A tree at the southwest and perhaps one at the southeast of the house, and one or two others placed where they will be of service and at the same time serve as a frame work of green for the house.

Trees planted in the yard at some distance from the house should be in groups instead of rows as is the common practice. Groups of threes and fives, with now and then a single specimen, gives a very pretty park-like effect. A few trees scattered around the farm, especially on pasture land, would not only form beautiful pictures, but also serve as shade during the hot seasons.

Such decoration as this would be a source of pleasure to those doing the work and the pleasant associations and memories of the farm home, where beauty and utility are combined, will do much to make home the dearest of all places, and especially to prevent the young people leaving the farm for city life.

The same landscape principle applies to beautifying the roadsides, but the plan is more simple. The same grouping is used, but this grouping must be confined to a very narrow strip of roadside instead of the broad expanse of lawn as before.

In New England there are many country roads, the sides of which have been planted to fruit trees, both for the fruit and the flowers. In Europe also the fruit trees are used, but in this section of the United States I think our own native trees and shrubs would be more practical.

To protect these young trees should be the aim of every farmer owning land along the highways. A little effort at the proper time will in time return a rich benefit to the community and our country roadsides and highways will be as attractive as some of the examples given us by European countries.

In a Southwestern town lives Bill Simmons, a rather simple-minded youth. His facility is contracting small debts at the local stores is only equaled by his success in evading their payment.

One day recently, however, Bill made the mistake of showing some real money before one of his creditors, and was forced to "come across."

"Now," said Bill, sadly, "we're square and I want a receipt. Make it legal so you won't be after me again."

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Pa—"Lizzie, after that young man said good-bye, did I hear the sound of osculation?"

Lizzie—"I don't know, pa; maybe it was his motorcycle you heard."

Call on a man of business in the house of business, only on business. Transact your business, go about your business and give a man time to attend to his business.

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 160 acres South Jordan, \$15 per acre; terms.  
 160 acres near Welby, \$20 per acre; terms.  
 160 acres under ditch, West Jordan, 2 miles from new sugar factory, \$40.00 per acre; terms.  
 9000 acres in Uintah Basin, Utah. A snap at \$3 per acre; terms.  
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**FOR SALE**  
 The best hog and dairy farm in Utah containing eighty acres. Also a few very choice duroc boars ready for service.  
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 Richmond Utah

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**BIG SAVING IN SHOE BILLS.**  
 Shoes are repaired same day as received and returned by C. O. D. Parcel Post, and delivered to your door. It is just like having a modern, well equipped shoe shop on the place.  
 We own and operate SEVEN shops, employing more than 30 people. We are the largest shoe repairing company in the West and guarantee to please every customer.  
 Price list: Mens half soles 75c, ladies half soles 50c, heels straightened 25c, rubber heels 40c and 50c. Patch 10c and up.  
 It will save the 10c C. O. D. charge by sending repair charge and postage with order.  
**Royal Shoe Repairing Co., Inc.**  
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 2473 Washington Ave. Ogden, Utah  
 7 Main St. Logan, Utah.  
 8 Carr Fork, Blingham Canyon, Utah.

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**HELP BUILD UP YOUR NEIGHBORHOOD**

It is a well known fact that the character of the majority of the farmers in a given section has much to do with the standing of the whole neighborhood. A few first-class farmers in a community will do much in the course of time to create interest in better farming and better living. There are many instances of that kind on record. Wonderful progress has been made in all farming communities during the past 20 years, still some sections are as far ahead of other sections in the way of taking hold of new things as some farmers are ahead of others in the production of crops, live stock, and general management of the farm.

It is the duty of every farmer, at least he should so consider it, not only to help himself and advance his own interests, but also to take a pride in the community in which he lives. To that end he should do all in his power to precept and example and sometimes, perhaps, by words to help those of his neighbors who are slow to adopt modern methods and see the advantage of certain improvements. If you have found an improvement in your dairy to be profitable, have discovered a high yielding variety of corn, or have learned that by feeding a certain ration to your cattle or hogs you get more economical results than before, tell your neighbor about it. It would, of course, not be good policy to tell him that he is doing his work wrong or that he is standing in his own light in refusing to adopt better methods, for that would only arouse antagonism on his part and then your influence would be of no value. How to persuade a man to adopt up-to-date methods can not be told on paper as that will depend upon the man himself, the conditions under which the matter is discussed, and many other factors too numerous to mention. A knowledge of human nature is required in a case of this kind.

At first thought you may shrink from this so-called duty of helping your neighbor get out of the rut and perhaps conclude that you are too busy to undertake to convert a stubborn fellow to change his methods. Perhaps that may be true, still the

fact remains that it is to your own interest to have every man in your neighborhood prosperous and up-to-date in everything he undertakes. The better your neighbors' farms are cared for and the more prosperous the farmers, the greater the commercial value of your land. This has always been the case and probably always will be, because a prosperous, wide-awake neighborhood is worth a great deal to a newcomer and his family.

It is a well known fact that the farm press has done much toward helping the progress of agriculture in recent years; so much so that in communities where counts have been made it has been found that the most progressive farmers pay more attention to agricultural literature than those who hang back and claim that they can learn nothing from the printed page. If every farmer could be induced to read one or two good farm papers much more rapid strides would be made along better farming lines, but to bring this about is an exceedingly difficult and almost impossible task without the aid of the farmers themselves. This suggests one way in which our old subscribers may do something to aid in the upbuilding of their communities and at the same time do us a good turn by inducing some one not now a reader to subscribe.

**STRONG POINTS IN SILO BUILDING**

F. M. White, University of Wisconsin  
 When building the silo remember that—

Good silage can only be secured by having practically air-tight silo walls; Silage will keep better in the round silo, as the shape make possible a more thorough packing;

Smooth and perpendicular walls, from top to bottom, prevent air pockets forming which will spoil more or less silage;

Silo walls must be strong to resist the pressure of the silage;

Durable materials are necessary to resist the decaying action of the weather, and of the silage;

The cost of maintenance can be cut down by building the silo of a material that requires little attention.

**WHY AUTUMN LEAVES ARE YELLOW**

Do you know that it is the same coloring matter that makes leaves yellow in the fall and butter particularly yellow in the spring, also that it is the same coloring matter that makes carrots yellow? As a matter of fact one of these pigments is called carotin and xanthophylls are found in large part of the coloring matter of carrots. The other yellow pigments are known as xanthophylls. Both carotin and xanthophylls are found in grass and are particularly abundant in the yellow leaves of autumn. The latter pigment develops in the late summer and autumn as a result of the slowing down of the living processes of the plant. The reason why butter becomes more yellow in the spring, when cows are on green grass, is because these coloring matters are present in large quantities in the feed. Aside from this, however, it is known that breed influences the color of milk and butter.



# RICHARDS' DUROC JERSEYS

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GRAND CHAMPION BOAR.  
SENIOR CHAMPION BOAR.  
EIGHT FIRST PRIZES.

GRAND CHAMPION SOW.  
SENIOR CHAMPION SOW.  
FIVE SECOND PRIZES.

FIVE THIRD PRIZES.

**RICHARDS DEFENDER**, Grand Champion Boar was pronounced by many capable judges to be the best Duroc Boar ever brought west. He is 17 months old and weighs over 500 pounds. The big type with quality. That's why he has so many admirers.

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SALT LAKE CITY, UTAH.



# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region

OFFICIAL ORGAN OF UTAH AGRICULTURAL COLLEGE

VOLUME XII; No. 11

LEHI AND SALT LAKE CITY, UTAH

OCTOBER 16, 1915

## The Way to Build a Silo--How to Make Silage

Answered by Ben R. Eldredge.

Moroni, Utah, Sept. 27th, 1915  
Utah Farmer.

I have been planning some on building a silo and I am writing for information about building one. My ranch is on quite high ground and where I would build a silo is at the top of a hill that rises quite straight up for 50 feet. I am planning on starting a hole 4 feet square at the top of this hill and putting in 6 inch concrete for 5 or 6 feet down; then I will be past all gravel; from there on I will commence tapering the walls out in a round bottle shape, then plaster these walls with cement as they will be solid clay walls. I expect to go down pretty well to the bottom of the hill.

I wish to ask your idea about running a large pipe from the foot of the hill direct into the bottom of the silo for the purpose of drawing out the silage.

I know but very little about a silo and nothing about the form of the silage, whether it is thick or thin, but would like for you to explain through your paper all about a silo and how the silage compares with beet pulp in form.

Please tell me if my plan of a silo is good or not. I have a water cistern built on the same plan at present and positively know it is good.

Some information in this regard will be appreciated.

Thanking you in advance for same,

Yours respectfully,

(SIGNED) JAMES DRAPER.

Answering the above letter, I will say, the writer does not have a correct idea of what silage is. Corn silage is the kind most generally used in this state. It is made by cutting the crop in its early maturity; that is, when the ears are beginning to ripen or are in the early stage of ripening. The lower leaves then on the plant are beginning to turn yellow and the husks are also beginning to turn yellow. At this stage the plant contains its highest nutritive value and the stalk contains a high per cent of moisture. The corn is cut and hauled to the silo where it is chopped into lengths from half to three-quarters of an inch. This is elevated generally by means of a blower into the silo and firmly tramped and packed so that there is no chance for air pockets around the

sides and the weight of the mass itself, as it settles, presses out most all the air from between the particles. We then have a compact mass of green, juicy fodder which ferments

through a pipe or a chute and has to be pitched out of the silo with a fork.

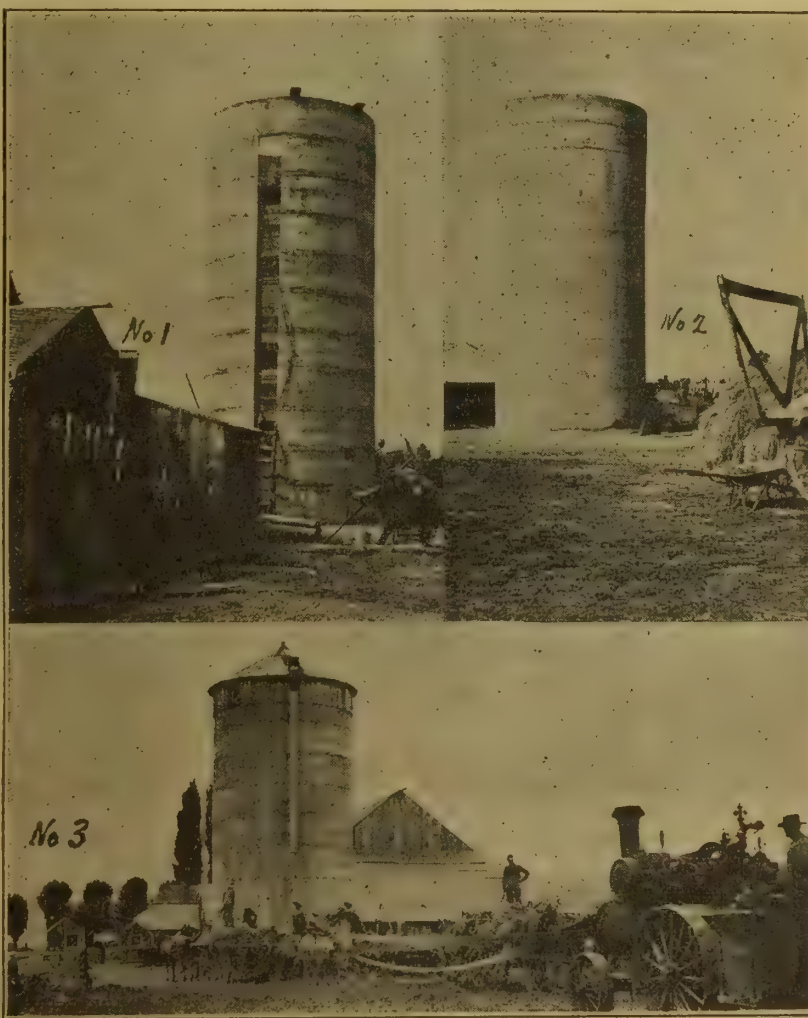
While I have said it cannot be drawn off through a chute, it is generally dropped through a chute that is

of short lengths of 2 inch tongued and grooved material; one length at a time of this is removed as the silage is lowered.

Now then, the main requisites in a silo for the proper curing of silage is a smooth, straight wall with no corners, or, if there are corners, that they be formed at as wide an angle as possible; and in order to meet these requirements the cylinder composed of cement has been found the best.

Now, coming back to the letter above, it can readily be seen that a bottle-shaped silo, after filling, would permit the settling of silage in such a way that it would not be packed closely against the sides of the silo near the top. Here the air would enter and reaching the silage near the sloping wall would cause a high percentage of mouldy and spoiled silage; for it is the contact with the air that spoils this feed. Pit silos can be made all right but the sides must be perpendicular from top to bottom and should be plastered as the gentleman has suggested. In making a pit silo a good concrete collar about 6 inches thick and of the diameter it is intended the silo should be, must be formed about the opening of the pit. This collar will prevent the entrance of flood water, the caving of the earth, and give a firm edge to work over at filling time and in taking out the silage. The advantage of a silo built above ground over the pit silo is in taking out the silage, which is quite heavy and quite a few hundred pounds has to be handled at each feeding as from 30 to 35 pounds is the amount usually fed per annum. In the silo above ground this mass that is taken out each day is dropped down, while in a pit silo it would have to be elevated, requiring some device for that purpose. It is true it is cheaper to fill a pit silo, as the silage there is merely cut and dropped into the pit, than to fill a silo above ground where the silage has to be elevated, but the elevating of the silage at filling time is done by regularly-built machinery and the work is all over when the silo is filled, but the taking of the silage out of the silo is a daily job, and one that calls for muscle, hence the advantage in having the silo easily emptied is greater than the advantage of having it easily filled.

(Continued on page twelve)



No.1—12-foot silo on farm of Joseph Kirkwood, American Fork, Utah, showing continuous doorway. No. 2—16-foot concrete silo on farm of W. H. Chipman, American Fork, Utah County, Utah. No. 3—16-foot concrete silo on farm of W. C. Winder near Salt Lake City, Filling the silo.

heats and practically is cured in its own juice and by the heat that has been generated in fermentation. In feeding this silage a layer is taken from the top and is handled by a fork with rather close-set tines. It is not in a state that could be drawn off

erected for this purpose against the side of the silo. It is pitched through doorways that are placed at regular intervals one over the other up the side of the silo and sometimes the doorway is continuous from bottom to top, the door itself being composed



# Why the Farmer Needs Organization In a Marketing System

By John Nicholson.

"The principal reason why the cost of food is increasing year by year in the United States is that the American farmer is blind, deaf and dumb so far as the organization of his industry is concerned.

"The coalescence tendency of the age; the corporative and co-operative activities in finance, in commerce, and in labor, so patently manifest in our day, are, in this country, almost altogether absent in the industry of agriculture.

"No wonder, then, that the American farmer is commercially lame, commercially dumb, commercially deaf and commercially blind; no wonder, then, that, in the United States, the cost of food is increasing year by year and day by day.

"For the great mass of Americans the high cost of living really means the high cost of food, and we are faced with the extraordinary situation that in a country which enjoys unsurpassed facilities for raising food of every kind most native products are, on the one hand, cheaper than they ever were, while, on the other hand, food-stuffs are dearer than they ever were."

Mr. David Lubin, whose words I quote, is the permanent delegate of the United States to the International Institute of Agriculture at Rome. During his long residence in Europe he has made an exhaustive study of agricultural organization and of rural credit systems, and he has given much valuable evidence upon these subjects before various Congressional Committees and to the State Department. Mr. Lubin has been for many years a merchant and fruit grower in California, so that his investigations abroad are supplemented by a thorough familiarity with the practical aspects of agriculture and of marketing conditions in this country.

Mr. Lubin is saturated with this subject. He is extensively and minutely informed. He is enthusiastic, eloquent, overwhelming. He carries you in a flash from Deacon Fairweather's mortgaged farm in Arkansas to the steps taken by Tiberius Sempronius Gracchus in 133 B. C. to help out the Roman farmers.

What Mr. Lubin said to me (and all

"And the rain descended and the floods came and the winds blew and beat upon that house and it fell not, for it was founded upon a rock."

When storms come, will they find your future on the solid financial foundation of a healthy bank account?

Prepare NOW by opening a savings account with this solid old bank, and build it steadily.



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SALT LAKE CITY

Founded 1859. "A Tower of Strength"

of it was interesting and significant) would fill at least six pages of The World if it were set in type. All I can do is to report concisely his account of the two cardinal factors upon which depend prosperity for the farmer and cheap food for the people. One of these factors is the thorough organization of agricultural production and distribution, the other is the establishment of rural credit institutions which will enable the farmer to borrow money at a low rate of interest. For his models in these undertakings, Mr. Lubin turns to Germany, where, he has satisfied himself, agricultural problems have been solved with greater success than in any other country in the world.

"There are no food trusts in Germany," said Mr. Lubin. "Why? Because the national Landwirtschaftsrath—you can translate it as Farmers' Council—could put a food trust out of business overnight. But that's only the beginning of the story. In Germany the consumer of agricultural produce can't be held up by the railroad, he can't be held up by the middleman, he can't be held up by the wholesaler, he can't be held up by the cold storage people, and he can't be held up by the retailer.

"The result is that when a German farmer has earned a dollar by raising potatoes or cabbages or whatever it may be, the ultimate consumer doesn't have to pay five or ten dollars for what the farmer got a dollar for.

"Now let us see just what the Landwirtschaftsrath is and just how it keeps the German people supplied with plenty of good and cheap food. We'll call it Farmers' Council for short. Every farmer who owns land has a small portion of his tax assessment set aside for the support of the Farmers' Council. This entitles him to vote in the election of a Chamber of Agriculture in his township. Each township organization elects a delegate to a county organization. Each county organization elects delegates to a state organization. There are twenty-four of these state organizations, and their members elect seventy-two men who constitute the national body.

"Think of the thing in the form of a pyramid. At the base are millions of individual farmers, above them are thousands of township councils, above them hundreds of county councils, above twenty-four State councils, and at the apex the seventy-two national councilors.

"The whole institution is semi-official and autonomous, is thoroughly democratic in its structure and is perfectly representative of the knowledge and understanding of the great body of agriculturists in the German Empire.

"The Farmers' Council has two main functions. The first concerns its relation with the National Legislature, the other concerns every detail which enters into the marketing of agricultural produce. No law bearing on agriculture can be passed by the Reichstag unless it has first been submitted to the Farmers' Council and reported upon by that body. This insures a highly skilled examination of every Government measure affecting

agriculture; it amounts in practice to this, that the farmers exercise the power of initiative and referendum in regard to all legislation of special character which touches their economic life.

"The operations of the Farmers' Council within its own organization are varied in the extreme. Among the most important features are these: The collection and universal distribution to the farmers of every kind of information about the demand for agricultural produce, the working out of problems in regard to packing and delivery, the devising of plans by which small shippers may combine to take advantage of car-lot rates, the proper supply of produce to all parts of the Empire, so that there shall not be scarcity in one place and an overstock in another. The last function is of the utmost value, for it is by this means that the Council can head off anything in the nature of an attempt to corner the market.

"There is no reason whatever why this system for the scientific marketing of farm products should not be adopted in the United States. As illustrating the need of it let me give you an instance. Driving through Massachusetts I saw a great heap of apples in a field. I wanted to buy a few, but I was told that I could take as many as I wanted for nothing, as

there was no market for apples, and and rot. Now, there was a market they would simply lie on the ground for those apples, and for thousands of similar heaps—what was lacking was an organization which could have told the owner where that market was, how to reach it, and how much he should have got for his product. Multiply this instance by a million and you will get an idea of how things go to waste in this country and why the cost of food is so high.

"House joint resolution 344 was introduced in Congress early this year calling upon the President to appoint a National Marketing Commission for the purpose of setting up an organization such as I have described. It has not yet been called up, but action is pledged at the coming session.

"If you want an example on a small scale of what a marketing organization can do in this country you can take the work of the Citrus Protective League of California. Twenty years ago the citrus industry was producing about 5,000 car loads of fruit, and the growers got such poor prices that they were led to believe that they were being ruined by overproduction. The Citrus Protective League was formed, and its inquiries soon showed that the trouble was not overproduction, but defective distribution, which en-



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"The work of the Citrus Protective League has resulted in carrying production to 45,000 car loads, and in realizing for the growers a fair price for their product without increasing the cost to the consumer. There isn't a reason on earth why similar work on a huge scale should not produce similar results for all raisers of food-stuffs throughout the country.

**Cheap Money for the American Farmer**  
"One end of the farmer's problem is to secure economic marketing for his produce; the other end is to raise the money needed in his operations without difficulty and without being bled to death by interest charges.

"Just as Germany has solved the question of marketing through the agency of the Landwirtschaftsrath, so she has solved the question of rural credit by means of the Landschaft. This system was devised a hundred and fifty years ago, and was put into operation by Frederick the Great. From that day to this it has been a complete success, and thousands of millions of marks have been put at the disposal of German farmers by an institution which does not possess a cent of capital.

"That sounds like a dream, doesn't it? It isn't any dream; it's just a carefully thoughtout practical plan with a great big idea back of it. Here's the idea. If a farmer in this country wants to borrow money he has to go to a bank or a trust company; in other words, to an organized body of leaders. In Germany the farmer goes to an organized body of borrowers. That's what the Landschaft is—the German farmers banded together so that their combined credit may be at the disposal of each member.

"The plan on which the Landschaft is worked is extremely simple. A body of landowners get together and take out a charter under the State and national laws of Germany. The land of each member is then assessed on the basis of its earning capacity. If a landowner wishes to borrow money he goes to the Landschaft office and applies for a loan. When the sum to be borrowed is agreed upon the Landschaft takes a mortgage for that amount, plus certain small charges, and issues to the borrower a bond. This bond is sold by the borrower in the open market, and in this way he gets his money.

"The Landschaft becomes responsible for the redemption of the bond, and insures itself against loss by requiring a regular payment spread over a number of years. This payment is so calculated that at the time the bond matures the interest and principal have been collected, or, as it is termed, amortised.

"The arrangements for guarding against the default of the borrower are very effective. The mortgage held by the Landschaft is so drawn that if the borrower fails to pay the interest and amortization charge as they fall due the directors can, without going through any legal proceedings in a court, foreclose the mortgage, sell the land to the highest bidder, retain what is due to the Landschaft, and pay to the borrower any balance which may remain over.

"A remarkable testimony to the soundness of this system as it is operated in Germany is to be found in the fact that Landschaft bonds sell on the German stock exchanges at a higher

price than Government bonds, although the former are not in any way guaranteed by the Government.

**The Growing Army of Farm Renters.**  
"On a superficial review of what we read in the papers it would seem that the last man who needs anything done for him is the farmer. We are told that there never was a time in the history of the country when the farmer was so prosperous. He has his automobile, his wife has her fine city clothes, and there's plenty of money in the bank.

"Set against that beautiful picture the fact that, according to the census of 1910, 37 per cent of the agricultural land of the United States was in the hands of renters, and that 16 per cent of those renters had sprung up in the ten years immediately preceding the census. Where does that leave the American farmer in 1920? Off the map, except so far as he is working to pay rent to some trust that has brought up his land and to furnish a handsome income to some middleman who robs him of the proceeds of his toil.

"The only way you can save the American farmer and bring down the high cost of living is to organize a national marketing system and a national rural credit system. The full details of successful enterprise of this kind are before us in the experience of Germany, and with proper legislation and adequate safeguards the United States would be an ideal field for the adoption of such simple and effective expedients."

## ENGINE TROUBLE

### Dirty Ignitor Points

If your engine has been in use very shortly previous to the time you experience trouble in starting, trouble may be due to dirty or short circuited points. With a contact ignitor test completely without removing the ignitor from engine as follows: First see that all connections in battery and wiring are firm, then loosen the wire from the insulated stationary electrode and with switch closed, snap wire across other terminal. If a good spark is produced you are sure battery is giving current.

Next turn engine till ignitor trips and try wire on insulated electrode. If a spark is produced here, the points are short or carbon. If not spark, the points are not short circuited. Now turn engine again but stop just before ignition trips. Points are then in contact inside. Try wire again on the insulated electrode. If no spark is produced points are dirty. If a spark is produced the ignitor is all right.

If points are dirty or short circuited, the ignitor must be removed and cleaned. Tests are best made in order given above as it would do not good to test for dirty points if battery is worn out or if points are short circuited.

With a jump spark system, the test is not so easy, but the plug can easily be removed, examined and tried while outside the cylinder. Be sure the plug is dry as a very fine film of moisture, even tho it be gasoline, covering point and porcelain will short circuit a plug. Battery is tested by short circuiting plug on outside before removing from cylinder. For this purpose use screw driver or other tool with wood on handle to prevent receiving a shock.—E. R. Gross, Colorado, A. C.

## WHITEWASH, A PAINT

### SUBSTITUTE.

A whitewash that is almost as serviceable and cheaper than the cheapest paint for wood, brick, or stone has been used by the United States government for whitewashing lighthouses. It has also been used to embellish the east end of the White House in Washington. The whitewash is made as follows:

"Slake half a bushel of lime with boiling water, cover during the process to keep in steam, strain the liquid through a fine sieve or strainer, and add to it a peck of salt, previously dissolved in warm water, three pounds of ground rice boiled to a thin paste and stirred in while hot, half a pound of Spanish whiting, and one pound of clear glue, previously dissolved by soaking in cold water and then hanging over a slow fire in a small pot hung in a large one filled with water. Add five gallons of hot water to the mixture, stir well, and let it stand a few days, covered from dirt. It should be applied hot, for which purpose it can be kept in a kettle or portable furnace."

By the addition of coloring matter, states Prof. Geo. Olson of the Washington Experiment Station various shades of color can be obtained. The coloring matters generally used are ochre, chrome, Dutch pink, raw sienna for yellows and buff; Venetian red, burnt sienna, Indian red or purple brown for reds; celestial blue, ultramarine, indigo for blues; red and blue for purple, gray or lavender; red lead and chrome for orange; Brunswick green for greens.

Yellow ochre added to the whitewash gives a cream color; lampblack or ivory black produces a pearl or lead tint; four pounds of umber to one pound of Indian red and one pound of lampblack, makes fawn; and four pounds of umber and two pounds of lampblack produces the common stone color.

## WHAT THE FARMER DID

A city man recently visited with his "country cousin." The man from the city, wishing to explain the joys of metropolitan life, said: "We have certainly been having fun for the last few days. Thursday we autoed to the country club and golfed until dark, then trolled back to town and danced until morning."

The country cousin, not to be outdone in the least, began telling some of the pleasures of the "simple life;" "We have had pretty good times here, too. One day we buggied out to Uncle Ned's and went out to the back lot, where we baseballed all that afternoon. And in the evening we sneaked up to the attic and poked until morning."

A sturdy old farmer, who was listening and who was not to be stumped in the least, took up the conversation at this point and said: "I was having some fun about this time myself. I muled to the cornfield and ge-hawed until sundown. Then I suppered until dark and piped until nine o'clock, after which I bedstedded until the clock fived, after which I breakfasted until it was time to go muleing again."—Ex.

Father—"How's your ball team making out, Jimmie?"

Small Son—"Great, pop! We've got bats, balls, mashes, uniforms and an imitation diamond ring that we take turns wearing."



# Picking, Grading, Packing and Delivering Apples

(Instructions sent out by the Utah Fruit Growers Association.)

## Picking.

Pick apples carefully; avoid bruising. Every apple should have a stem. Do not fill picking sacks or field boxes too full. See that your picking boxes are free from nail points, splinters or any other defects that will injure the fruit. Make several pickings, if necessary, to get the apples at the proper stage of maturity.

## Jonathans.

This variety should be picked just as soon as they will let go with the stem on the apple, then pack and ship them without delay. This will insure the variety keeping better and the fruit is not so apt to develop brown patches on the skin or become discolored inside.

## First Grade.

### No. 1 or Extra Fancy.

This grade is to consist of apples 2½ inches in diameter and larger, except Winesaps, Missouri Pippins and Jenitons which may be packed 2¼ inches in diameter. All apples in this grade to be well formed, mature, clean, hand picked, free from worms, worm stings, limb, frost or hail scars, sundamage, skin puncture, insect pests, blemishes, bruises, visible watercore or other defects or injuries.

The following varieties may be packed under this grade, subject to the color requirements specified:

### Solid Red Varieties.

The following varieties must have not less than two-thirds good red color:

Aiken Red, Arkansas Black, Black Ben Davis, Delaware Red, Gano, King David, McIntosh Red, Spitzenburg, Winesap.

The following varieties must have not less than three-fourths good red color:

Jonathan, Missouri Pippin, Black Twig.

### Striped or Partial Red Varieties.

The following varieties must have not less than two-thirds good red color:

Delicious, Stayman.

The following varieties must have not less than fifty per cent good red color:

Ben Davis, Jeniton, Northern Spy, Rome Beauty, Snow, Smith Cider, Wagener, York Imperial.

### Yellow or Green Varieties.

The following varieties must have the characteristic color of the variety.

Grimes Golden, Orange Pippin, Orange Winter, Winter Banana, Rhode Island Greening, White Winter Pearmain, Yellow Newton, Northwest Greening, Ortley.

## Second Grade.

### No. 2, or Fancy.

This grade must consist of apples 2¼ inches in diameter and larger, of practically the same standard governing first grade apples, except that slight leaf rub, scratches, or russetting shall be permitted up to a total of one inch in diameter in boxes containing large apples, three-fourths of an inch in diameter in boxes containing medium apples and one-half inch in diameter in boxes containing small apples.

Solid Red Varieties, including Jonathans, Black Twigs, Missouri

Pippins, must show half good red color.

Striped or Partial Red Varieties must have not less than forty per cent good red color.

Yellow or Green Varieties must have characteristic color.

### C. Grade.

This grade to consist of merchantable apples 2¼ inches in diameter and larger not included in the Extra Fancy and Fancy grades. Apples must be free from worms, worm holes, serious injuries, skin puncture; bruised or broken skin will not be permitted and not exceeding two stings thoroughly healed.

Layering will not be required in this grade, but the apples should be double faced and jumble packed.

### Combination Fancy.

Summer, fall and other varieties not provided for, such as Astrachan, Alexander, Bailey's Sweet, Bietingheimer, Duchess, Early Harvest, Fall Pippin, Strawberry, Tolman Sweet, Twenty Ounce Pippin, Wealthy, Wolf River, Yellow Transparent, Apple of Commerce, Canada Red, Jeffrey, Nonesuch, Baldwin, King Pewaukee, Rambo, Shackelford, Walbridge, Willow Twig, Mann, Senator, shall be packed orchard run with all apples culled out that will injure the sale or keeping qualities of the fruit.

Layering not required in this grade, but the apples should be double faced and jumble packed. Stamp this grade FANCY.

### Directions.

Study the illustrated grading card. The first two grades must be packed in diagonal layers throughout the box.

Pack only in carefully made, clean boxes.

Line the box with paper (creased to prevent tearing.)

Care in selecting apples of uniform size for each box will avoid any difficulty in putting up the layer pack.

The face of the box should be put in first, stem end toward the cover, except some oblong varieties which may be packed on the side.

The finished boxes should bulge above the center two inches and slope to about one inch above at the ends before the cover is nailed on.

The buldge on a box of layered apples is made by using the smaller apples at the end of the box and larger apples toward the center.

Stamp the grade, variety grower's name and number in the order given on the end of the box BEFORE NAILING ON THE COVER.

See that your stamp and inch pads are in good order.

For various reasons it is sometimes advisable to ship apples either in a special apple sack or bulk. Fruit shipped in this manner should be graded by the rules specified for summer, fall and odd varieties. Don't conclude that bulk and sack shipments will take everything but limbs and leaves.

Squash should be carefully handled in hauling, and placed one layer deep on wooden racks in a warm, well-ventilated storage house.

# Making a Home On The Reservation

It Takes Pluck And Determination For A Few Years—Then It Comes Easy.

No, don't buy a ranch unless you have a real backbone so that you can do real work. So that you can enjoy jumping out of bed a little before sun rise and whiff the clear pure air like an elk, and size up a fifty acre field to be plowed and go at it with the same avidity that a town clerk would a piece of pumpkin pie.

Do you feel that way? No! Too much cake, cocoa, soda and cocktails and late hours. Not enough ham and eggs, mutton and beef and potatoes and gravy. The rancher who is a manager has time for everything. He has time for a hunt and a fishing trip and goes with his family to the county fair and the state fair, this of course after he gets on his feet, so to speak.

But they say the farmer works from daylight till dark and then does his chores, may be so, but not the farmer who knows how to keep the boys on the farm and who knows how to keep his wife alive, and both be young when their locks turn gray.

We know one couple who had been married a year or two and had a nice little home in town with most of the modern conveniences such as electric lights and washer, bath with hot and cold water, etc. The husband was a rustler, the wife was musical and made home happy and of course the baby played a part in that.

Everything was lovely until one evening they took stock and found themselves behind, a little in debt, with no better prospects for the future. There and then they decided to sell out, cash up and buy a ranch. They decided to go back to kerosene lamps, a bath in a wash tub and "root hog or die."

They went to the reservation two and one half years ago with \$1,000, bought and bargained for 160 acres of good land with some improvements. Bought three good brood sows and seven turkeys, we forgot to say they had a team, wagon a cow and some chickens. They sold their piano when they cashed up and have been without music and many a time they have longed for some of the good things they used to have.

The dark gray days of fall and winter grew mighty dull for the little woman who used to play and sing beautifully and one day she said "Hubbie, I guess I wasn't cut out for a ranchers wife; this life is certainly wearing." That remark took about 3,000 volts of energy out of him and the wife noticed it. Really the husband had been happy but now was losing heart expecting his wife to suggest the city. But never another word of complaint, instead she made things as pleasant as possible. One day his sympathy got the best of him but he didn't get far before she said—"cheer up honey, let's take stock."

Two and one half years have passed since they got the ranch and now they have 1,100 bushels of grain, 17 head of horses, nine cows, 90 hogs, over 70 turkeys, don't know how many chickens but they sell lots of eggs and they have plenty of hay. They found that 80 acres was all they could properly tend so sold 80 acres and don't owe a cent. They intend to get a gasoline engine soon to run the

washer, saw the wood, and chop the feed. Then a piano and an auto. The little wife told the writer that they wouldn't give their ranch for the best city property they know.

They will soon gather their potatoes, carrots and beets and they have all the good things to eat a healthy family could desire. They walk around together and admire their horses, cows and hogs and count the calves and colts. They could spare enough meat eggs, butter, milk, cream and vegetables to feed an ordinary family a year and hardly notice it. A ranch is no good.

There is no fiction about this, the family mentioned is well known to everyone in Ashley valley, the young lady having been born and raised in Vernal, and is only one instance out of many who have left the parental roof to rustle for themselves. A great number from Vernal could tell the same story but to it would be added experiences of hardships during the canal building days when the pioneers on the reservation drove to Vernal and payed \$20 a ton for hay and endured privations that are hardly believable. Some have consumed small fortunes but have kept their health as a rule and have learned the lesson of life. "Love and Endurance."—Vernal Express.

## NO NEED TO FEED CALF BUTTER-FAT.

From Hoard's Dairyman.

A prominent Holstein breeder informed us the other day that he was feeding \$2 worth of butter-fat each day to his calves. It has been his opinion that a better calf could be developed by feeding whole-milk instead of skim-milk. Another breeder, raising the same kind of cattle, feeds whole-milk for two weeks only and then uses skim-milk, and it is his opinion better calves can be reared on skim-milk than on whole-milk.

Our observation and experience lead us to believe that skim-milk is a better feed for dairy calves than whole-milk. For the first few months calves fed on skim-milk may not have coats as sleek and smooth but when they shed their baby hair, which is done when about eight months old, their appearance will be quite as satisfactory and their growth fully equal, if not superior, to those fed on whole-milk.

The skim-milk should be fed warm and fresh or as soon as it comes from the separator, or disappointing results will follow. The feeding of cold or tainted, or too much skim-milk is invariably the cause of producing unthrifty calves. The calf's milk should be weighed each time for the best results and increases in allowance made very gradually. When skim-milk is properly handled and fed there is no necessity of feeding butter-fat worth thirty cents a pound to grow the right kind of dairy calves. Skim-milk for growing animals is a much better feed than most people realize.

Expect the best of life, then you are more likely to work toward it and to get it.



## Questions and Answers

### CORN EAR WORM.

I have a field of popcorn and I find nearly every year there is a worm in the tip of the ear. What can be done to prevent this injury next year?

Answered by Dr. E. G. Titus.

Thorough fall plowing with a good harrowing of the soil is one of the best methods of preventing the work of the corn ear worm, since it destroys many of the pupae or resting stage that are present in the ground. When the corn begins to silk in the early summer, dusting the silks with a dry mixture of Paris green one part and road dust or flour one part, has been found quite successful in killing the young worms. The eggs of this moth are laid on the silks and if there is sufficient poison on the silks at the time they are hatching, many of them will be killed.

Salt Lake City, Utah.

Utah Farmer:

Dear Sir:—I was told today that it was quite a common practice in parts of Colorado to put up last crop of alfalfa perfectly green and that cattle liked it so well they would leave the regular cured alfalfa every time to get this. Put up perfectly green the alfalfa will pack very solid of course and to turn black and to inexperienced would seem spoiled and valueless, but nevertheless the cattle prefer and thrive splendidly on it. What do you know of the value of this proposition?

Yours truly,

R. MICHELSEN.

Answered by G. E. Morton State Dairy Commissioner, Colorado.

In response to the inquiry from R. Michelsen: I would not call it a common practice in Colorado to put up a third cutting of alfalfa in a green state, although it is practised by certain individuals.

It is true that cattle will eat stack-burned alfalfa before they will eat the perfectly cured product. I know of no test having been made to determine whether the feeding value is as great as that of good hay, but we do know that cattle relish it, and the losses probably are small, the loss consisting chiefly in change of form of the protein found in alfalfa leaves. It is more difficult to get the stack-burned hay out of the stack, making the labor of feeding greater, so that I would hardly advise the stack burning of alfalfa as a regular practice.

Newton, Cache Co., Utah.

Utah Farmer:

Dear Sir:—Will you please tell me if you can of any farmer in Utah that has raised the grass called the Bromus Inermis I wish to know when is the best time to sow it on dry land where there is no chance to irrigate and wish to know if it is proved to be good grass for a pasture. If you please give me the name address of some one that knows and oblige yours.

Respectfully,

AMOS CLARK.

Answered by F. S. Harris.

Bromus inermis has been raised to quite an extent in Utah for a number of years. It is fairly well adapted to dry land and does very well in some sections. In other places it has not done so well as alfalfa. About 15 lbs. of seed to the acre is used. It may be

planted either in fall or spring. Fall seeding should be done early. I am having a copy of Utah Experiment Station Circular Number 15 sent to you. This will give additional information.

### PROFIT IN GOOD SEED POTATOES

The right kind of potatoes bring better prices than the wrong kind, and the right kind can usually be grown with very little added trouble.

The right kind of potatoes is the kind the public wants. To find out the taste or the public as to potatoes, D. E. Willard, of the Northern Pacific Railway Company not long ago made an extended investigation—in homes,

hotels, restaurants, and commission houses—from Chicago to the Pacific coast. He found the demand was for sound potatoes, of good flavor, medium size, and regular shape. He also found that such potatoes commanded higher prices than mixed lots of large and small, diseased and sound, regularly and irregularly shaped potatoes.

To grow the kind of potatoes the public wants, then, is the thing to do, and the way to begin is to plant the kind of potatoes you wish to grow. This means careful selection from the hills, observing the following rules:

Select only from hills in which a larger part of the potatoes answer the description mentioned. Potatoes from

such hills are more certain to breed true to type.

Select potatoes weighing from five to eight ounces.

Use for seed no potatoes grown in fields showing a considerable amount of wilt or rosette.

Avoid potatoes showing brown ring discolorations at the stem end.

Save for planting no potatoes which are bruised, cracked, or decaying, or which show discolorations at stem end.

Store carefully in moderately warm, dry and well ventilated place.

Carrots and beets keep better if a little dry sand is put over them. This prevents drying out.

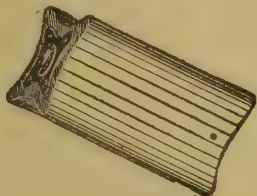
## A LESSON IN CHURNS



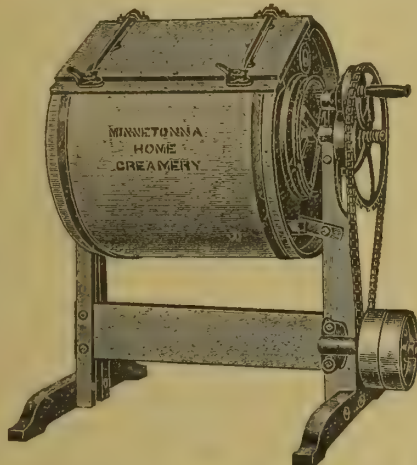
Cross section view of barrel showing how butter is worked between two rolls.



Removable shelf and idle roll in one piece.



Main Roll.



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**CREAMERY**

These simple parts constitute the Minnetonna Creamery.

They are easily washed and kept sanitary and sweet.

Many, many farmers are reaping the benefits afforded by these churns.

They each testify of their economy and high quality of butter.

Write to us and get a special price and proposition showing how you can secure a Minnetonna Home Creamery Plant.

**Strevell-Paterson**  
**Hardware Co.**

**Salt Lake City**





With which is combined "The Deseret Farmer" and Rocky Mountain Farming." Established 1904

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We believe that every advertisement in this paper is backed by a responsible person. We guarantee the reliability of advertisers, but we will not undertake to adjust trifling differences between subscribers and advertisers. This guarantee holds only when written complaint is made to the publisher within one week from the date of any unsatisfactory transaction, accompanied by proofs of swindle and loss and within one month of the date of the appearance of the alleged deceptive advertisement in the Utah Farmer, and the subscriber must prove that in writing to the advertiser he said: "I saw your advertisement in the Utah Farmer."

#### OFFICIAL ORGAN

Utah Horticultural Society, Utah State Dairymen's Association, Utah State Bee Keepers' Association, Bear River Valley Farmers' Protective and Commercial Association, Agricultural College Extension Department and Utah State Fair Association, Utah-Idaho Millers' and Grain Dealers' Association.

When you ask for a change of address always give OLD and new postoffice address.

An eastern paper is predicting fifty cent wool by January first.

Nearly everybody respects a good man and reveres a good woman.

Always grade your fruit and vegetables when preparing them for market and sell them according to their grade.

One farmer who has been hill-selecting his potatoes for the past four years has increased his yield 500 per cent. The first year he only found 16 hills out of a 100 that yielded six marketable tubers. Each year he has been hill-selecting his seed and this year his yield was 70 hills out of the 100 with six or more marketable potatoes. If an increase of this kind can be obtained, it pays well to select your seed. Be sure and discard all diseased potatoes from your seed.

Do not sell off all your brood sows this fall just because pork is down. Beef and mutton are very high and pork cannot remain down. The farmer who makes money in the hog business is not the one who plunges but a consistent way all the time. The man who plunges generally sells his brood sows at a low price and buys back at a high price. He generally finds himself just well in the business when pork drops and just out of the business when it rises. Do not sacrifice brood sows.

#### WATCH THE HEAVY MILKERS.

The fall of the year is the time that many dairymen plan to have their cows freshen. September and October are two favorite months for this. The pastures are short, and even where good fall pastures are available, the feed is not so plentiful nor so satisfying as are good spring pastures. Because of this, cows are unable to obtain sufficient feed in pastures for best production. It is, therefore, desirable to supplement the pastures by some feed in the stalls. With high producing cows, even plenty of good hay is not sufficient. A small grain allowance should be given in these cases.

#### COST OF PRODUCING BEEF.

To be successful one must be able to meet all kind of conditions. If you are producing livestock you know that it is costing more now than it did a few years ago. Higher price of land, labor, feed and care all help to increase the cost.

One way to reduce the cost of beef making is to breed and feed better cattle. The scrub must go and in its place must come the animal which will put on the greatest amount of flesh in the shortest possible time. This day and age demands better breeding bulls and cows and proper care and feed in handling the calf from birth to the butcher's block.

#### LOOK TO THE ROADS.

The season of the year will soon be here when the fall rains will have some effect on our roads. They should have a split-log drag run over them to fill up the low places and round out the road so the water will run off. A preventive is better than a cure, so look to your roads before they get "bad." Roads leading to the farm from the public highway should be put in good shape for winter use. Look to the drainage of all roads so the water will run off and not stand in pools. A little work right now will help improve the roads for winter use.

#### FALL CLEAN UP ON THE FARM.

A fall clean-up is a good way to war against the farm and garden pests. Fall plowing is generally recognized as a good method for the prevention of insect injury, but rubbish left in piles along fences, or in fence corners, or in the orchard or kitchen garden, make the best kind of winter quarters for insect pests in various stages. Trash of this kind, should be cleared away, preferably by burning, as such burning destroys any insects among the rubbish.

A few hours spent now, destroying these pests and their wintering places will be very profitable to any farmer. A clean-up will also help the appearance of the place.

#### WASTE OF TIME AND MATERIAL.

In all this western country there is too much waste, both of time and material. A number of people have considered this question of such importance that a conference was held at the time of the National Educational Association at San Francisco and discussed the need of developing individual and community saving of waste material and waste time.

We should live within our means, see that our weekly or monthly expenses do not exceed our income. Keep a very careful record of our personal and farm expenses and it will assist in arriving at the proper basis of saving and accumulating.

Each farmer would profit greatly if he would adhere to a resolution not to purchase any machinery which was not absolutely needed so long as the older machinery could be repaired and used economically. It was the opinion of this congress, and there were able authorities in attendance, that practice of this sort would change the entire financial situation with many who are now paying prohibitory interest rates.

Spend more time in taking care of our tools, machinery and farm buildings. Often somethings goes to waste when a repair would make it useful. If you want to become successful, use your time profitably and avoid the wastes.

#### FALL PASTURES.

At this season of the year, livestock farmers have possibilities open to them in the way of utilizing or wasting much feed. Practically all crops, including hay, have been gathered, leaving the fields bare. At the same time, absolutely clean harvesting is so difficult that most fields contain considerable feed which can be utilized by most classes of livestock. If livestock are not available, or if they are not turned into the fields, the feed left in is wasted.

For a month or six weeks now, it will be possible to run the dairy herd or dry stock and young animals in these fields. The amount of feed otherwise consumed during that time is an item well worth considering. If the third crop of alfalfa has been cut for some time and a new growth of several inches has taken place, it will probably be safer to clip the young alfalfa and let it dry for a day or two before turning cattle in. They will then eat the dry hay and will be able to keep the new growth down sufficient to eliminate danger from bloat.

The feed consumed in this manner is very largely returned to the soil as manure. It is well scattered so that the land receives the maximum benefit from it.

Pasturing in the fall is, in case of many crops, helpful to the next season's cultivation, as the animals con-

sume most of the grain and seeds that have been left in the field.

#### THE HIGH COST OF LIVING.

For a number of years a cry has been heard from all quarters about the high cost of living and as time goes on it seems to gather volume. All the papers and magazines and journals are talking about it and one need only read over a few of these articles to see that there is a great variety of opinion as to where the blame rests.

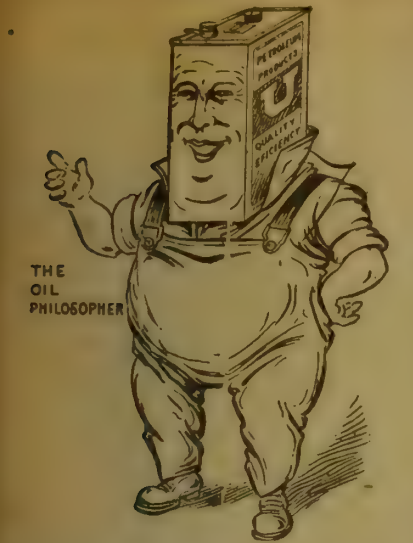
It is true that the farmer receives a much higher price for his products now than he did a few years ago. Not so long since, corn sold at 25c a bushel, hogs at 3c a pound and good steer calves at \$10 to \$12 a head where as now corn goes at 50c to 75c per bushel, hogs at 6c to 7c per pound and steer calves at \$20 to \$30. It is perfectly evident however, to anyone who knows anything about high land values and the farmers cost of production, that he is entitled to this increase in prices. In fact, unless the farmer is a very good manager and is taking advantage of the best thought and most modern agricultural practices, he will not be getting rich at present prices. The farmer is not getting more than his share—too often he is not receiving his just dues.

Some lay the entire blame for the high cost of living onto the middle man and claim he should be eliminated by direct distribution from producer to consumer. Others hold this scheme to be impracticable. They say the middle man is a necessity and that no parcel post system or any other system of distribution from farmer to consumer will ever displace him. They advocate controlling him and cite the achievements of the Citrus Fruit Growers of California in this regard to show that it can be done.

It seems to be generally agreed that our distributing system in America is at fault and needs the most careful study by capable men and women everywhere. It appears that Germany and Denmark have worked out this problem quite successfully for their conditions. Whether the systems in use in those countries can be adopted in their entirety in the United States is doubtful. In all probability they can be adapted to our conditions and made use of. At any rate it behooves every farmer to study these systems and to give the problem that is before us his best thought. The masses of the people must be educated to a certain extent before a new scheme of things can be instituted.

The Federal Government is beginning to study this problem of the distribution of farm products and it is probable that under its supervision the thing can best be worked out.





# Keeping the Staying Qualities In Harnesses

—By The Oil Philosopher.


Would you consider three or four years added to the life of your harness, worth while? If you think better service—fewer repairs—while the harness does live is worth anything, you'll be interested to know that

# Duckback Harness Oil

does put the staying qualities in harnesses. It seems to furnish the natural leather stimulant, which preserves the harness and gives it maximum efficiency.

Water runs off a harness treated with Duckback Harness Oil, just like it runs off a duck's back. Damp weather is coming. Use this oil to waterproof your harnesses.

If your dealer cannot supply you immediately with Duckback Harness Oil, don't even consider a substitute, but write the Utah Oil Refining Company, Salt Lake City, and it will see that you are supplied.

**GREATEST RAZOR Offer Ever Made!**

Send name and address (no money) and get this high-grade unmatched razor, round or square point, on 30 days free trial. If satisfied it is the best razor you ever used and wish to keep it send \$1.40, if not return it. This razor is made by a secret process that insures a velvet shave. D. A. BATEMAN, 230 E. MARKET ST., LOUISVILLE, KY.

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# Protect Roses This Fall

By George W. Park.

Rambler roses are considered hardy, but in an exceptionally cold climate the canes are more or less subject to frost. If a movable trellis is used it can be laid upon the ground, with the vines, on the approach of severe weather and completely covered with coal ashes, over which some fodder or straw may be placed as further protection. If the trellis is convenient and you wish it to remain upright, you can wrap the canes and trellis with building paper or heavy wrapping paper to protect from the cold winds during the winter, as the winds are more injurious to roses than severe cold, and any substances that will ward them off will be found a valuable protector.

Much of the damage to roses from cold is due to the season. If the autumn is damp and warm, roses will make a free growth, and not being properly ripened, frosts will invariably do them injury. Then again, if the winter should release its grasp until the fresh sap flows into the canes, swelling the buds and follow this by a severe cold snap, the plants would suffer greatly. If the precautions suggested are taken, the plants will come through the winter in good condition, and be ready for growing and blooming freely. The covering must not be removed in the spring until danger from heavy frosts is past.

All so-called hardy roses, also the ever-blooming roses, planted with a view of giving these protection in winter, should be planted in the spring. They will then become well established and make a good growth during the season. Such plants will be far better able to endure a hard winter than plants set late in the season, which have scarcely taken hold of the soil before the coming of cold weather. In a climate where Ramblers are doubtful, it is well to set them in a sunny exposure and train them to a trellis.

## CLEAN UP THE BARN.

John Harris, Salt Lake County.  
It will soon be time to bring the cows from the pasture and before this is done the barn should have a thoroughly good cleaning. All cobwebs should be brushed down and the walls and ceiling should be whitewashed or painted some light color. Either whitewash or paint will give a clean surface and make the whole stable look lighter and brighter. It might be well, too, to put in a few extra windows.

The dairy cow has had the freedom of the pasture and the fresh air of the fields for the last five months; she has practically maintained herself and produced milk upon succulent feed; she will soon be returned to the barn where she will spend the greater part of each day. It should be the aim of every keeper to see to it that his cows are housed as comfortably as possible and provided with a goodly quantity of variety of palatable feed that will nourish her abundantly and help her produce an even flow of milk.

The right kind of a cow will repay with interest every cent invested for her comfort—for warmth, light, ventilation, and feed. If she is not comfortably housed her returns will be cut down in proportion to her discomfort.

Other animals will appreciate a good cleaning up. For the small cost and time it will take to do it, there will come good returns. The pleasure and satisfaction to the owner of a good clean barn is worth while. It is a good protection from disease germs—a good clean barn. Right now is the time to do it.

## AUTUMN.

Hues of beauty, such as heaven Lendeth to its bow.

Although the sun did not cross the equator until Wednesday of last week and autumn is not reckoned by calculating meteorologists a season arrived, its fascinating glories are none the less visible now to the seeing eye. The leaves are undergoing their change of color scheme from the dead green of late summer to the bright yellow, red, brown and gold of autumn. A week has wrought striking transfiguration. Recall a landscape you noted last week and visit the spot again today.

Incomparably more beautiful than any other subdivision of the solar year is early autumn and we search memory in vain for recollection of a spot on this continent which excels at this season the charm of a wooded area. View such a landscape through the crystal atmosphere of summer and a perhaps offensively gaudy picture it would be. But through the golden haze of autumn it mellows and the colors blend. Little wonder painters despair at this season.

Before "the melancholy days are come, the saddest of the year" frost must have wrought fearful havoc. Though growing things are dying, these days are among the gladdest of the year; for Nature is most glorious as the end approaches.

## LACK OF CARE ANY AID TO THE GERM

Improper food, impure drinking water, lack of cleanliness, bad drainage, absence of sunshine, insufficient ventilation, over work, exposure to extremes of heat and cold—all of these contribute to loss by disease among farm animals. They do not kill of themselves, but they weaken the animal's powers of resistance against disease germs. It is because of this fact that the germs of tuberculosis, of anthrax, of glanders, of black leg, of cholera, and of other disease are able to get in their deadly work.

Careful attention to food, water, drainage, the admission of sunshine and pure air, the need of rest, the prevention of exposure, therefore, means health to one's animals, and that means more money in pocket.

The fall season is the time to see that provision is made for the comfort of the farm animals through the winter.

As soon as the frost cuts the foliage on the dahlia remove all but five or six inches, lift the plant out of the earth and let it dry in the sun for an hour or so, then put in a cool dry storage cellar. The tubers must not be dry enough to shrivel or moist enough to grow before spring.

Remove all trash and rubbish from the garden. If convenient, it is well to plow or spade the land that will be used for garden next year. This will help to get rid of many insects and weeds.



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## Sewing Lesson IX

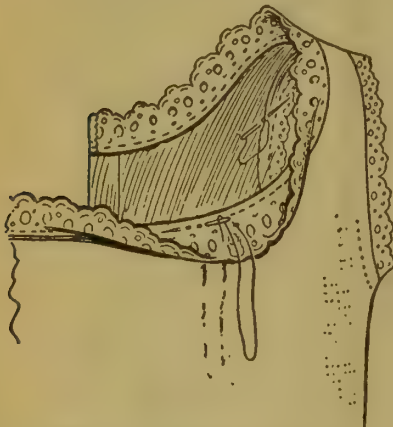
### Finishing Neck and Armholes of the Slip.

Supplies—Thimble; Needle, No. 7 Sharps; Basting Cotton; No. 60 Sewing Cotton; Pins; Emery; Scissors; Tape-Measure; the Undergarment.

Finishing the neck—The neck of the garment should be finished with a

stitches a generous eighth of an inch from the edge, covering the raw edges of the seam. (No. 31.)

The Armholes—The armholes should be finished with embroidery edging. (No. 32.) Divide your edging in half and use half for each armhole. Trim the muslin on the edging to within half an inch of the embroidery design.



No. 31 Finishing the Neck.



No. 32 Finishing the Armhole.

combination embroidery edging and beading (No. 31.) Trim away the muslin on the inside edge of the embroidery edging and beading for the neck to within three-eighths of an inch of the embroidery design.

Lay the combination embroidery on the garment with their raw edges even and their wrong sides together. Baste them a scant eighth of an inch from the edge and sew them well inside the basting with running stitches. (No. 31.)

Take out the bastings and turn the combination embroidery to the right side of the garment, folding it so that the seam sewing comes exactly in the crease. (No. 31.) Sew it with running

stitches a generous eighth of an inch from the edge, covering the raw edges of the seam. (No. 31.) Lay the embroidery on the right side of the armhole, with the right sides of the garment and the embroidery together and the raw edge of the embroidery an eighth of an inch beyond the edge of the armhole. Baste the embroidery on half an inch from its raw edge. Baste it very easily, or, when it is turned over, the inner edge will draw. Sew it with fine running stitches one-half an inch from the raw edge of the embroidery. (No. 32.)

Turn the raw edge of embroidery over on the inside of the armhole. Turn in the raw edge an eighth of an inch, baste and hem the fold edge. (No. 32.)

## Poultry Troubles During The Fall Season

### Treatment of Colds and Roup. Report of Missouri and National Contests For September.

The success of the flock during the winter season depends greatly upon how the birds pass through the fall season, which usually finds the flock composed of birds of all ages and all conditions and stages of moult.

The roosting quarters are found scattered all over the place, some roosting on fences, some in the poultry house, some in trees, and some in hovers or jammed into the corner of a house till they are two or three deep during cool nights. The ones roosting in houses and on the floor in the corner or some house are the ones which need attention.

One of the most common troubles noticed in the fall and early winter is colds and roup. A cold is usually the first stage or stepping stone to roup so that if colds are prevented, roup will be avoided. The two common causes for colds are an unequal heating of the body and the rapid reduction of the temperature. Roosting in a draft will cause a cold according to the first cause, and crowding will cause it by the second.

If a man's temperature gets too

high from exercise or extra clothing, nature sends out a perspiration or sweat onto the surface and by evaporation the heat units are taken up and the body is cooled. A hen's temperature is not reduced in this way, for she has no sweat glands in the skin. The moisture with the hen is carried out through the breath so for this reason, if a hen is very warm she will have her mouth open bellowsing the air in and out to take out the moisture and not to get an extra supply of oxygen into her lungs. If the chickens are crowded at night they are very warm, then come out into a cold frosty morning, the breathing organs are so chilled that a cold is the result, which paves the way for roup.

Many cases of roup attributed to the winter season had their real origin in the fall season. A hen's temperature is 106½ degrees. She is covered with a coat of feathers for protection. Therefore, hens should not be expected to live under conditions which are comfortable for man. More birds are injured by housing too closely and crowding than by the opposite.

## Reliable Farm Bargains

which we have personally inspected and can highly recommend. These farms are income producers.

40 acres, near Tremonton, in the great Bear River Valley. Full water right. All in the highest state of cultivation. Near good school, good roads, railroad and good social conditions. Big crops are a certainty in this beautiful district. Price complete, \$115 per acre. Ten years to pay. Interest at 6%.

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240 acres, 2 miles from railroad station at Rigby, Idaho. Good soil. 300 inches water, 4 room house, stable and other outbuildings. All necessary farm machinery. Share crops goes with place if taken at once. Only \$41.50 per acre, on easy terms.

360 acres near Blackfoot, Idaho. 200 acres can be cultivated, balance good pasture land. Good sandy loam soil, ample free water, house, stable and other out buildings. Exceptional bargain at \$8,000. Will exchange for Salt Lake City property.

6½ acres at 15th South and 3rd East streets, near Salt Lake City. Substantial 7-room house, two large chicken houses five flowing wells, shade trees and fruit trees. An excellent fruit and chicken ranch. Only \$3100. One-tenth of purchase price down; one-tenth each year. More land can be included if desired. A bargain!

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Salt Lake City, Utah

While we do not believe in a "balm for all ills," yet we find the following a good preventive and treatment for roup, canker, chicken pox, etc.:

Magnesium Sulphate.....	10 oz.
Magnesium Oxide.....	1 oz.
Sulphate of Iron.....	2 oz.
Ground ginger.....	2 oz.
Sulphur.....	3 oz.

Give one tablespoonful in moist mash to 12 birds each morning for three mornings and discontinue till needed.

The Magnesium Sulphate acts on the intestines; the Magnesium Oxide, on the kidneys; Sulphate of Iron acts on the blood; the ground ginger stimulates all organs; and the sulphur is a general antiseptic. This is therefore a good system treatment or tonic for the fowls.

For severe cases the dose mentioned above should be increased.

No one, however, should ever try to control a disease without first removing the cause. If your birds have a cold, first remove the cause, then administer treatment.

During the fall season all grains, weed seeds, etc., ripen so that if the birds have free range, they have an abundant supply of food, but the ration is often unbalanced for the ration usually contains too much fat producing elements with not enough tissue forming elements. If the birds have range on clover, alfalfa, cowpeas, etc., the ration is more apt to be balanced, but if they range in a corn field, the hens should be fed protein in some other form, for without it, the hens will get very fat but produce no eggs. Get all pullets to laying before cold

weather. If you do not, it will be hard to get them to lay during the winter. Pullets which lay in the fall make better breeders in the spring than those which wait till spring to begin laying.

### MOW THE WEEDS

#### ALONG DITCHES.

Weed seeds are spread in many ways. Wind is probably the most important agent. In irrigated sections, however, water also is undoubtedly a very important agent in carrying weed seeds from field to field, and even from farm to farm. Irrigation ditch banks are usually permitted to grow up in weeds. If these weeds are allowed to ripen their seeds, the latter fall into the flowing water, and are spread out on fields further down. On the way, the seeds are soaked up and are just in the proper condition to germinate when they reach the irrigated soil. These facts point out the urgent necessity of mowing the weeds along irrigation ditches, before they ripen their seeds.

Almost every time the advertised article is a good article. The unadvertised one may or may not be. You have no way of knowing and the maker doesn't seem to have confidence enough in his goods to tell you about them.

One-fourth teaspoon of soda added to the water in which cabbage or onions are cooking, will help to prevent strong odors. Cook them uncovered. They will retain their natural color better.



# Agricultural Lesson

## Lesson X—Soils.

By Prof. J. C. Hogenson.

The texture of the soil is determined by the size of its grains, the way in which they are grouped into clusters forming kernels or crumbs. In all agricultural soils except the very coarse and sandy one there is a granular structure which renders them more open and porous than they could otherwise be. When a soil is puddled this texture is destroyed and the separate grains are brought together into the closest possible arrangement and they become quite impervious both to water and air. The size of the grains in

	No. per linear inch.
Fine Gravel	1 to 2 M. M. 23
Coarse Sand	.05 to 1 M. M. 31
Medium Sand	.25 to .5 M. M. 164
Fine Sand	.1 to .25 M. M. 212
Very Fine Sand	.05 to .1 M. M. 353
Silt	.01 to .05 M. M. 820
Fine Silt	.005 to .01 M. M. 2352
Clay	.000 to .005 M. M. 25000

These particles would range from about 1-23 to 1-25000 of an inch in diameter.

If a soil were made up entirely of the largest size, then 23 would build an edge of a cube an inch on the side and we would have 12,167 per cubic inch. On the other hand if the soil were made up of the smallest sized grains we would have 15,625,000,000,000 per cubic inch, in one pound of soil with the largest grains 262,807 while in one pound of the finest we would have 337,500,000,000,000 or enough to make 64 lines from Boston to San Francisco and return.

The bureau of soils has established a number of series of soils each running from gravel to clay. Each has a definite resemblance both as to origin and composition of the soils it contains. Thus we have the:

Golvstan series, embracing the soils on the coastal beaches and marshes.

Norfolk series, light colored material with yellow sand or sandy clay subsoils in the Coastal plain.

Portsmouth series, dark colored material with yellow, mottled, gray sand and sandy clay subsoils of the Coastal plain.

Orangeburg series, gray to red sand or loam with red sand clay subsoil in the Coastal plain.

Houston series, gray or black calcareous prairies in the Coastal plain.

Vernon series, red sand, loam, and clay, typical of the Permian formation.

Gazoo series, dark silty soils of the flood plain of the Mississippi and its tributaries.

Cecil series, gray to red sand in loam with bright red clay subsoil derived from igneous or metamorphic rocks of the Piedmont Plateau.

Penn series, dark Indian red sand or loam with loam or clay subsoil of the same color. Derived from red sandstone and shale of the Piedmont Plateau.

Porters series, gray to red sand to loam, with red clay subsoil derived from granitic rocks of the Appalachian Mountains.

De Kalb series, yellow sand and loam with heavier subsoil of the same color, derived from sandstone of the Appalachian Mountains and Cumberland Plateau.

Hagerstan series, yellow to red sand

and loam, with clay subsoil of the same color, derived from massive limestone in resedval valleys and uplands.

Fort Payne series, light colored usually yellow, sand and loams resting on clay of same color, both soil and subsoil usually very cherty. Derived principally from dolomite.

Clarksville series. Soil of varying colors with a distinctive red or yellow subsoil derived from the limestone of the St. Louis group.

Miami series, light colored sand and loam resting on light colored glacial till or loess of the glaciated or loessial areas.

Moshall series, dark colored sand and loam, resting generally on light colored glacial till. Generally upland areas.

Sioux series, dark colored material rested on dark or light colored subsoils, with gravel beds within three feet of the surface occupying river bottoms in the glaciated area.

Dunkirk series, dark colored material found on the glacial beaches around the great lakes.

Oswego series, Residual prairie soils derived from interbedded sandstone, limestone and shale.

Sedgwick series, origin not clearly understood, the soils may possibly not be related.

Mariocopa series, calluvial wash from granite hills. Intermountain and Pacific States.

Fresno series, alluvial wash of granitic material. Intermountain and Pacific Coast.

Yakima series, derived from basaltic material and volcanic ash. Pacific Coast.

Redfield series, residual or alluvial from red sandstone strata of the far west.

Oxnard series, river, Delta and Coast Valley soils of sandstone and shale material. Pacific Coast.

Billings series, interior valley soils derived from sandstone and shale of the Great Plains.

Salt Lake series, lacustrine deposits, typically developed around Great Salt Lake.

Pecos series, alluvial, highly calcareous soils of the far west.

Imperial series, Delta soils of the Colorado Desert.

Salem series, derived from interbedded red sandstone, shale, and highly ferruginous basalt. Pacific Coast.

San Louis series, lacustrine deposits of volcanic rock material underlain by gravel within 3 or 4 feet. Intermountain Valleys.

If you make a little money this year don't put it into something outside. Put it into your business—the farm. What most farms, as well as many businesses, need is operating capital. And how is the farm to get it if we take the profits, as soon as earned, and put them into something else. There is probably no place where a little extra money will go further than right in the farm's own business.

Do you want to give the wife the most useful thing ever introduced into the kitchen? If so, make her a good, substantial high stool. About two feet three inches high. She can rest while working and the comfort she gets from it will be immeasurable.

# Protect the Garden Against Winter Weather

The protection of garden plants and shrubs during the winter should have our careful attention. The United States Department of Agriculture offer some suggestions about "putting the garden to bed."

Such flowers as peonies and hollyhocks will come up again the following year if they are properly protected during the winter, while others like cannas and dahlias, which are more accustomed to warm climates must have their roots or bulbs dug up and stored in a cellar.

## Hardy Perennials.

Cover hardy perennials, such as peonies, larkspur, hollyhocks, columbines, iris, platycodons, and perennial poppies, with a good coating of manure or other litter to a depth of 3 or 4 inches. In more southern localities this will hold the frost in the ground and keep the plant from alternately freezing and thawing; in more northern regions the manure will protect the plant from freezing to a depth that will cut off its water supply.

## Cannas and Dahlias.

As soon as the tops of cannas, dahlias, gladiolus, caladiums and similar plants are killed by frost, dig up the roots or bulbs and store them in a cellar where the temperature will remain at 55 degrees, and should never go below 50 or above 60 degrees. Do not shake any more earth from the clumps of cannas and dahlias than is necessary in removing them from the ground. Place the plants on racks or in slat boxes so the air may circulate freely through them. No frost must reach the roots nor must they become too warm or dry.

## Shrubs.

As a rule shrubs should not be trimmed in the fall. This process is timely immediately after the blooming period, if this is in the spring, as in the case of the snowball. If the shrubs bloom in the fall, as do some hydrangeas, the rose of Sharon, and some lilacs, they should not be cut directly after blooming, but in the spring of the following year. Lilacs, snowballs, and mock orange should be let alone during the winter, being neither trimmed nor covered with straw and manure.

## Roses.

Some roses, as the briar, and and rugosa, need no protection, but other varieties, such as the hybrid-perpetuals, teas, and hybrid-teas, need special care, particularly north of the fortieth parallel. Teas and hybrid-teas need merely a little manure on the ground to prevent alternate freezing and thawing in milder climate. Farther north, however, they should be treated as follows:

Cut the tops to within 30 inches of the ground. Cover the roots with coarse manure or leaves or similar litter. Hold this in place by evergreen boughs which also acts as a protection. Brush from deciduous trees or shrubs may be substituted for the evergreen boughs except in the most northern regions.

Mounds of earth about six or eight inches in height should be drawn about the base of the rose bushes to keep them from mice. As an added protection against mice, permit the ground to freeze slightly before win-

ter protection is supplied. In fact, roses should not be protected until after the first light frost.

## Climbing Roses.

In the south climbing roses usually need no protection during the winter unless they are a particularly tender variety. Farther north these roses need protection similar to that given to the tea and hybrid tea roses.

Where it is possible to do so, remove climbing roses from their supports, and cover the branches with a little dirt. A little fall trimming might be desirable to lessen the space occupied by the branches on the ground. Such side branches as are not to be needed for next season's blooming may be cut off. Such cutting off and shortening of the ends as would otherwise be done in the spring, may be done in the fall before covering, merely for convenience.

## TEN COMMANDMENTS FOR THE DRY-FARMER.

1. Thou shalt not speak scornfully of men, nor be prejudiced against thy neighbor because he harbors new and progressive ideas.

2. Thou shalt not listen to false witnesses who because they have failed, desire that thou shalt fail also.

3. Thou shalt not retard the development of thy country by permitting thy fields to become foul and the weeds to grasp and devour the moisture needed by the crops.

4. Thou shalt labor diligently six days to study and apply the principles of soil culture, and on the seventh day thou shalt thank the Lord thy God for all new and progressive life.

5. Thou shalt not be discouraged nor cast down if thou doest not succeed, but knowing that thou hast made a mistake, try again, for I say unto you, great will be the reward of him who doest his part well.

6. Thou shalt prepare thy land for the plow by seeing to it that no moisture has been allowed to escape, either through a lack of cultivation or through the growing of weeds thereon.

7. Thou shalt not covet thy neighbors auto that he hath purchased with the funds obtained for big crops grown but go thou and do likewise.

8. Thou shalt convey unto thy neighbor as thou wouldst that he convey unto you, all knowledge of better soil culture as thou shalt discover it thou are commanded not to hide thy light under a bushel.

9. Be not envious of thy neighbor who secures better crops, but try to learn his secret that thou mayst secure like results.

10. Suffer not thy children to leave the farm because of poor raiment and little pleasure, but go thou into thy field, though it be small, and diligently destroy every weed, prepare the seed bed, conserve the moisture and then faithfully garner the crops which by their abundance will bring joy and contentment to thy children who are to possess the land after thee.—Ex.

No merchant finds success in life,  
Nor ever will until  
He sells the goods that won't come back  
To customers that will.

The New Idea.



## THE HOME

### HOME CONVENIENCES.

By Luella M. Scovill.

A home convenience should save steps, save strength, or save time.

Many steps and much time and energy may be saved by having the work table and sink of the proper height and properly located. Provide a high stool on which to sit when working at the table or sink so that it will not be necessary to stand while preparing vegetables and other foods. Wood tables, covered with enameled iron or a composition top, will be more sanitary and easier to keep clean. These will serve the purpose of molding boards.

Many steps are saved by having shelves and books over the kitchen table, and drawers and a flour bin in the work table. Many utensils, as well as sugar, spices, flour, and other materials can then be kept within reach when one is working at the table. The stove should be near both table and sink. Have some of the drawers tin lined and covered for holding bread and crackers. It will then be unnecessary to carry bread to the cellar and put in a boiler after each meal. For one working in a large farm kitchen, a table or tray on rollers will save many steps in getting utensils or food from one part to another, and getting food and dishes to and from the dining room.

There are numerous small devices which make the household cleaning easier. A mop wringer which fastens to the mop pail saves time and strain; a dust pan with a handle saves stooping; the dustless duster prevents scattering of dust from one piece of furniture to another; the dustless mop lightens the daily care of a floor; a soap dish hung on the side of a pail when cleaning saves the soap by not having it soften in the water and prevents the soap being laid where it might cause a white spot on furniture or floor. A cotton flannel bag, which ties with a string over the broom, is convenient for wiping off walls and ceilings.

The greatest aid in keeping the house clean is the vacuum cleaner. It may be used on the rugs, mattresses, and upholstered furniture, or it will take up dust from the bare floor.

While good arrangement and the many small devices are necessary to make for convenience in the laundry, the greatest saving of strength comes from the use of power machinery. If power, such as water, gasoline engine, or electricity, can be used, the hardest task in the household is made easy. An open floor drain connecting with a sewer pipe will carry off waste water from tubs and washer.

A paper pad and a pencil should hang in the kitchen on which to write when any supplies need ordering.

The fireless cooker will save fuel and hours of watching food. It is especially useful when the housewife is obliged to be away from home a part of the day.

An expenditure to secure any device which conserves the time, energy, and thought of the house worker is not only economic, but is a just recognition of the value to the home of the happy, rested woman who then

can live with the family as well as for it.

### HELPFUL SUGGESTIONS FOR THE KITCHEN.

If you are so unfortunate as to burn a slice of bread, the easiest and quickest way to remove the scorched part is to rub it off on the grater. This is done in a smooth manner and with no unnecessary waste.

If a kettle scorches on the bottom, set the kettle of vegetables or fruit just as it is taken from the fire in a dish of cold water and the food will taste very little of the scorch.

When peeling onions, do it in front of the open hearth, where a brisk fire is burning, and you will not cry over your work, even though there are quite a quantity to prepare. Or, if you use a gas range, open the cold water faucet and work in the flowing water. And if you do not have running water, working in a pan of water will serve the same purpose, save that water readily absorbs odors, and it may be necessary to renew this as the work progresses. One clever woman raises the window and works outside, holding her hand and the onion just a little above the sash, thus keeping most of the fumes from her eyes.

Have a pair of old scissors handy for snipping bits of onion, parsley or any vegetable which should be cut into small pieces. A delicious salad, and one which is as inviting as it looks, is quickly made by placing a few leaves of blanched lettuce, cabbage or chicory on each individual plate, slicing upon it a ripe tomato. In serving, the guest may have a choice between sugar and vinegar or olive oil with vinegar. The latter is very much relished by many. And there is a cotton-seed oil which costs less money and tastes quite as well.

A woman who is justly proud of a redressed mahogany table, a family heirloom, washes the table with soap and water after a meal if there is a soiled spot left between doilies or as a result of a warm plate, and then rubs it carefully with a soft cloth on which is a little oil. In this way her table is always a thing of beauty.

A soft mop with a little oil applied will do the dusting quickly and thoroughly, especially over an oiled floor, and at the same time preserve the finish of the wood.

One woman of our acquaintance makes it a point to put her little savings into household conveniences. And it is surprising what a help even a few dimes will prove in supplying the kitchen with labor savers.

There is the small glass lemon squeezer, only a simple cone, but by rubbing half a lemon over this the juice is speedily ready to be poured out wherever needed, while the seeds are at the same time separated and removed. In this way there is not a bit of the lemon wasted, and yet the work is done in an instant, and the dish is cleaned by pouring a little cold water over it immediately after use.

The food chopper is a utensil which no one can afford to be without. It helps to save so many leftovers and make them palatable in an entirely new form that this alone is

sufficient to render its use a saving in the end.

Save all the odds and ends of bread, drying and crushing with a rolling-pin, or, better, passing through the food chopper. They can be used for escalloping, thickening soups, covering eggplant, oysters, fish or anything where a delicious fry is desired.

To clean tan shoes, use a piece of banana peel and then rub dry and polish with a soft cloth.

### MILLARD COUNTY HOME DEMONSTRATION PROJECT.

By Miss Gertrude McCheyne, Leader Home Demonstration Work.

A very fine piece of work is being done by Miss Hettie White, Home Demonstrator for Millard County. Miss White has the true spirit of extension service, that of being helpful in any way in which the women feel the need of the same. Her principle efforts have been directed towards assisting woman in the planning of their home work. She has been invited to stay from three days to a week at a time in various homes. Her method is to work with the women for a day, noting their methods, suggesting improvements, and using such equipment as dish drainers, iceless refrigerators, and small articles that are of value in saving labor and time. Many questions come up in the day's work regarding meal preparation, table service, care of children, and the hundred and one problems that confront the housewife. After the day's work is over the two women make out a suggestive schedule for the following day.

In her report Miss White says "We timed the work and tried to get meals at regular hours; discussed food values and simple, nutritious dishes; used the iceless refrigerators and fireless cooker; kept an account of expenses (the woman promised to keep this up for the coming year); tried to figure out leisure time for the mother, discussed child training, dress and nutrition. Introduced the idea of scalding dishes without wiping, and also used the steam pressure cooker on beans and meat. In fact I tried to reach every phase of her life possible."

We believe that one of the best results will be the adjusting of indoor and outdoor labor in relation to time of performance and expenditure. In most cases farm work is arranged without much; if any consideration being given to the plans for house work, making the hours unnecessarily long and laborious. Sometimes the fault lies with the women who lack system. A schedule that is not sufficiently elastic to meet emergency or some change of plan, is not practical in any home, but there must be sufficient co-operation between the farm and home to make it possible for a woman to be able to make some definite plan for her work.

The systematic keeping of accounts is also being handled as a part of this project. She has secured the co-operation of several housewives in the keeping of budgets for the country home. In this way the women are doing their part in systematizing farm accounts which are always incomplete without the family earnings and expenditures are included.

The women are making good use of their opportunities and will do so

## No Wonder It Is So Good

When you take into consideration the extreme care exercised in making Utah-Idaho Sugar, no wonder it is so good. To make sugar like "Utah-Idaho" is an accomplishment any company may be proud of.

If you could follow the various processes from the fields to the sack, you would not be surprised at the sugar being good. It takes all the skill and knowledge in the sugar world to make this master product.

Wherever sugar is used it should be



## Your Farm Equipment

should include "Never-Rip" work clothes.

—They'll give lasting service and pay for themselves many times over, in lightened labor, clothing saved and in service given.

—For that big farm or for the little backyard garden this spring, there's no assistant more able and useful than

### SCOWCROFT NEVER-RIP

—1200 farmers and workingmen ask for them by name every day—

—because they know that entire satisfaction is guaranteed when the label says "NEVER-RIP."

### ANSWER

The advertisements in this issue either by asking your local dealer for them, or he does not carry them in stock he may send for them, or you can write direct for catalogue and information. Don't forget to mention the Utah Farmer for we are back of every advertisement that appears in our paper.



## Pattern Department

Full directions for making as the quantity of material required, accompany each Pattern. Price of each Pattern, 10c; no extra charge for postage. When ordering, all you have to do is to let us know your name and address, the number and size of each Pattern you want, enclose 10c for each pattern, and address all your orders to: PATTERN DEPARTMENT, THE UTAH FARMER, LEHI, UTAH.



7397—Children's Dress. Cut in sizes 2, 4, 6 and 8 years. Round or square neck and long or short sleeves may be used.

7421—Ladies' Skirt. Cut in sizes 22 to 32 inches waist measure. The skirt is cut in three gores.

7432—Ladies' Shirt-Waist. Cut in sizes 34 to 46 inches bust measure. Long or short sleeves may be used.

7410—Ladies' Empire Negligee. Cut in sizes 36, 40 and 44 inches bust measure. The skirt of this negligee may be plaited or gathered.

7033—Children's Dress. Cut in sizes 2, 4, 6 and 8 years. The dress closes at the back and has long or short sleeves.

Price of any of the above patterns 10 cents each.

### PATTERN ORDER COUPON

Send the following Patterns:

Pattern No. .... Size or Age. ....

Pattern No. .... Size or Age. ....

Pattern No. .... Size or Age. ....

Name. ....

Town. ....

I enclose (c) R.F.D. .... State. ....

(To pay for same)

Love (passionately)—"Sir, I love the very ground your daughter walks on!"

Father (grimly)—"No doubt you do —It's worth \$200.00 a front foot."

to an even greater extent when it is seen that better health and greater economy are the results of such work.

### WHAT ONE CAN DO

#### ANOTHER CAN

That it is possible to practically rid even a country town of flies is shown by the following story:

Roosevelt, one of the progressive towns of the Uintah Reservation, had some fifty or more cases of typhoid a year ago. The city water, which is always under inspection, was proven not guilty. Nothing remained but the swarms of flies, unsightly outhouses on the outskirts of town, and corrals overflowing with wasting fertilizer. The Home Economics Association, which is a body of towns' women banded together irrespective of creed or social differences, in the interest of community betterment decided to stamp out the evil. They made a canvass of the town urging the men to clean up the corrals and outhouses, and the women to screen their homes, install fly catchers, and make use of fly swatters. The City Council were asked to appoint a constable to see that the work was not only carried out at the time, but was permanent. One man whom the president of the Association approached on the subject for a clean-up asked who was back of the movement. The reply was that the City Council were doing the work. "Alone" came the question. And the reply that the Association was back of the Council elicited the remark, "Well! I do not care so much for the Council, but when those Home Economics women get after one it is time to get busy." Does that mean that the mothers are more anxious to safeguard the lives of their children than the fathers? Why not make this a year of just such town clean-ups as Roosevelt had. The Home Economics Association, the City Council and the patriotic men and women are to be congratulated.

### GOOD MILK NECESSARY TO MAKE BEST CHEESE

E. H. Farrington.

Much can be done at the farm in helping to produce only the best quality of cheese, which will command the highest price, give complete satisfaction to the best class of trade, and prevent loss to the cheese factory.

"At this season of the year, one of the most common complaints from the trade is due to sour or acid cheese. The principal cause of sour cheese is the use of over-ripe milk."

Although milk may be ripened too far before the whey is drawn in the cheesemaking process, by an inexperienced cheesemaker, much of it is overripe when brought from the farm to the factory. The most successful cheesemakers, as a rule, are those who have secured the co-operation of their patrons in the care and delivery of their milk to the factory in first class condition.

On these farms attention is given to the two general principles, cleanliness and cold, in the care of the milk. Every care is taken to keep dirt and dust from getting into milk. Once in the milk, only the largest and least harmful substances, as straw, chaff or hair can be removed by straining through cloth, while the smaller particles of dust, bacteria, and any substances, as pieces of manure, which partly dissolve cannot be removed by a strainer.

The process of producing milk that will make the best quality of cheese includes cleaning the cow's flanks from manure or marsh dirt, clipping long hairs, and wiping the udder free from loose dust or dirt which might fall into the pail. A closed pail will exclude three-fourths of the dirt that would otherwise be found in the milk. Clean hands, and clean overalls, not used in other farm work contribute toward a clean product. Keeping the milking room free from dust and strong odors; handling manure, bedding, hay or silage after the milk has been removed from the barn, and not before, is part of the process.

After the milk is drawn it is immediately strained through clean and preferably new cotton, contained in a wire gauze strainer, into clean milk cans. To insure the cleanliness of the cans care is taken in washing, rinsing, scalding, drying, airing, sunning, and protecting the cans from flying dust. Within an hour after the milk is drawn it is cooled to the lowest temperature that can be obtained by the use of well water, and kept at this low temperature—about 55 degrees—until ready for delivery.

### THE PLAY OF THE

#### YOUNG GIRL AND BOY

As the little children grow up, their desires for recreation and play broaden. The boys want to go fishing and hunting and swimming. The country always holds some new phase of life or experience and, if rightly directed and understood, the child can gain untold riches from the nature lore that surrounds him. Here again the father and mother can be of inestimable value to him, encouraging and helping him in every tendency which he shows. Gain his confidence, cultivate and enjoy with him the things which interest him; and let him come to you with all his treasures and his great adventures.

So only can you give to your children and gain from them the great and happiest moments of life.

If your girls want the same experiences in the "great out-of-doors," let them have them, although at this older period, home and its possibilities attract a girl. Here the mother should gain her daughter's confidence and with the spirit of love, teach her the things that will make her a womanly woman, and a worthy future mother. The great tragedies in girls' lives have come from this lack of understanding between mother and daughter.

The household duties could all be primarily learned in the spirit of play—make each duty a game—and finally through the play side, its real value will be seen and appreciated. This is not as foolish as it may sound, for it is the basis of the greatest girl movement in the country today, and thousands of young girls are gaining a greater, truer knowledge of life's work through first seeing it in the guise of play and pleasure.

No one is too old to play a game, so if you have, or will take, a few spare moments in your day's work—go out in the yard and play a set of tennis, or a game of tether-ball, volleyball or quoits with your daughter, your work and hers will have a keener interest all the rest of the day, because you have played and played together.—Edwina Mary Layman, Colorado A. C.



### Back of an Avery Outfit Is a Good Pedigree

First of all—behind an Avery Outfit is the knowledge that comes only from long experience. For more than 10 years the Avery Company has been experimenting, building and developing power farming machinery. The first company now manufacturing tractors and plows to design and build a power plowing outfit.

Second—the Avery Company were designers of the first "self-lift" plow, the only motor with removable inner walls, the only electric starter, etc. There are more acres plowed every year by Avery Outfits than by any other make.

Third—back of an Avery Outfit are the hardest possible tests. Avery machines are the only make which have been entered in every motor and plow contest and every big plowing demonstration. They were also introduced by being sold on approval.

Fourth—our own large factory and own branch houses, which insure your getting machines built under careful supervision with permanent expert and repair service after you get them.

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We have given Avery Outfits the best backing any man could ask. There are 7 sizes—from 1 to 10 plows—fit any size farm. Learn all the facts about them. Write now for a complete tractor and plow catalog or call on any Avery Agent, Branch House, Jobber or our Home Office.

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7 Sizes—Fit Any Farm

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**THE BEST** \$45.00 strictly all oak tanned western Double Team Harness on earth with breeching and collars for



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Hame tugs, 1½ inch, with three loops and patent buckle. Traces 2½ inches solid single ply, with cockeyes.

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ONLY THE ADVERTISEMENTS OF LEGITIMATE FIRMS ARE ACCEPTED.

THE WARES OFFERED BY THESE FIRMS ARE INVARIABLY THE BEST OBTAINABLE AT THE PRICE.

IF YOU BUY THEM ONCE, YOU ARE MORE THAN LIKELY TO CONTINUE BUYING THEM.

PLEASE NOTE WHAT OUR ADVERTISERS OFFER THIS WEEK. THEN FOLLOW THE ADS FROM WEEK TO WEEK—GET THE ADVERTISING HABIT.



## Weaning the Farm Colt

To keep the colt growing without interruption during weaning time and afterward is a most important consideration in producing horses profitably. A good horseman aims to replace the milk that the colt has been accustomed to secure from its mother. He tries also to reduce the worrying and fretting of the colt to a minimum. To wean a colt appears to be a simple matter. It is simple as many do it; yet the very low degree of success that is shown on many farms by their unthrifty colts is evidence that there is something wrong or that there is something lacking. Often in a few weeks during weaning time the youngster changes from the growing, sleek, milk-fat colt to a stiff-haired and unthrifty, stunted individual. The colt if properly cared for, need lose but little of his flesh, bloom and spirit.

### Grain to Be Fed.

Grain must be used as the milk is taken away. It is necessary that the colt has been taught to eat grain before weaning is attempted. Oats have always been preferred by horsemen for young colts. They are undoubtedly superior to any other single grain. The colt likes a mixture or a variety of grains and will thrive best on such a ration. He relishes corn and it may well be fed as part of the grain ration. It may be said that corn contains a rather high percentage of fat. True it does and so does milk which is as nearly ideal food as nature can make. Corn should not be fed alone, nor in too great quantities. Bran is a splendid feed and contains material for bone and muscle. A mixture of oats 60 per cent, makes a ration that will enable any colt to grow rapidly. A handful of oil meal may be profitably added. The colt will be more likely to eat enough to almost make up for the lack of milk.

Hay should be provided in plenty. Doubtless alfalfa is the most desirable for young growing colts. Both grain and hay should be of the best quality. If it is at all possible to furnish succulent grass for the colt it should be done. This is a big factor in preventing any check in the growth of the youngster.

### Company of Other Colts.

Naturally the colt will miss the company of his dam. If he has been accustomed to stay in the stable or yard while the mother is out at work there will be less fretting on that account. If the youngster has followed the dam constantly and has never been kept separated from her, he should be broken gradually to stay away from her if it is at all convenient to do so.

If there are several colts on the farm it is best to wean all of them at the same time. The youngsters love company and if there are two or more of them together, they will fret and worry less.

The stall or pen where the youngster is confined should be such that he cannot injure himself. The door and fence should be high enough so that he will not try to jump out. Nothing but a clean and comfortable place with plenty of sunshine and proper ventilation should be used for the colt during weaning time. It should be made possible for the colt to exercise freely every day.

### Management of the Dam

Just before weaning it is best to

change the dam from succulent pasture to dry feed. If she is being fed grain the amount should be reduced to a minimum. This will have a tendency to reduce the milk flow. The colt should then be allowed to suckle only two or three times per day instead of being with the mother all the time or at least over night. It may be necessary to milk out the mare occasionally for a few days, in the case of large milk producers, and where there is a tendency for the udder to swell. Having done these things it will be comparatively simple and easy to keep the colt away from the mother entirely without injury or handicap to either the dam or her foal.

Having made the change slowly and gradually the youngster will not miss the milk greatly. He will eat grass and hay, will take exercise and will grow without any set back. If he is kept healthy, thrifty and growthy, the very best of results will follow.—H. E. McCartney, Purdue University.

### FIFTY DOLLARS ON THE COLT.

In a conversation with a prominent horse buyer recently, the question was asked as to what was the greatest failing in raising horses and mules today, and the answer was: "Not enough care of the colts in fall and winter." As a matter of fact, this could be extended a number of months before fall, although this is one of the critical times in a colt's life, when \$50 can be easily lost or gained and at very little trouble or expense. It is simply a matter of giving a little barley, alfalfa meal, or other nourishing feed to help him along until the grass is rich and high in the spring and he is sufficiently hardy to take advantage of it.

To begin with, too little care is taken of the brood mare in seeing that she has sufficient food for prospective foal. The owner oftentimes seems to think that she can get along with the same amount of food that is given to an animal that is not used for breeding. The giving of a little extra grain is exceptionally necessary during the few months just before foaling. Mares are also unable to produce as good foals as they should in the spring when put out on dry pastures in the fall without extra feed. The extra feed should be given until the colt is weaned, for the sake of both animals.

For the colts out in pasture in the fall the amount of grain that is required is very small, as they can pick up enough food to keep them and the grain will just be needed to put them in the best of condition, and take the place of the milk they have been accustomed to, as it is the lack of the nourishing, easily digested milk that hurts them.

Two things will be accomplished by this that will have a great effect upon the price when the animal is mature. In the first place it will add at least 100 pounds to his final weight, if the pasture is no better than is needed for mature horses, and in the second place it will give him the "quality" that a stunted animal could never have. The extra hundred pounds on a draft animal should be worth about \$50 and the better quality something more. This applies to both horses and mules.

## The Way to Build a Silo ---How to Make Silage

(Continued from page one)

No silo can be successfully emptied from the bottom; for it would mean great waste, not only at the bottom but around the sides, where, as the mass would settle, crevices and openings would be made that would admit the air to the extent that soon the whole mass would be permeated with mould and decay.

In feeding from the top a layer is taken off an inch and a half or two inches deep each day, which keeps the entire top surface in a condition so fresh that after feeding has once begun there is no waste whatever.

Of course, pending the time between the filling of the silo and the time feeding is begun there is a layer on the top surface that becomes mouldy and spoils. This there is no practical means of preventing, but it is a minimum quantity and when feeding is begun all spoiled silage should be removed and thrown on the field for fertilizer.

Mouldy or spoiled silage is dangerous for any class of stock.

Silos may be built of lumber, brick, stone, concrete block or any building material that will construct an air-tight wall, and silage may be made from most any forage that cattle will eat and relish either in a green or dry state. In some places alfalfa is used. Oats and peas have been used. Wheat, also. And where there are canneries the peavines and corn husks are placed in silos with success. In Utah, where we have such an excellent climate for curing hay, we question if anything would be gained by ensiling alfalfa, but it has been amply proven that corn silage, with alfalfa hay, makes an ideal ration for dairy and beef cattle and sheep and small quantities of corn silage can be profitably used in feeding horses and mules.

I submit photographs of concrete silos that are being used with great success in Salt Lake and Utah Counties. I consider them good types of the best silos we have yet learned to construct.

### INTERESTING FACTS

#### ABOUT BEDBUGS

The following interesting facts about bedbugs have been taken from the current issue of Farm and Fireside:

"Adult bedbugs will live a year in a glass bottle without food.

"Bedbugs can transmit disease from one person to another by biting.

"Young bedbugs feed nine times in seventy days under favorable conditions.

"A safe way to kill them is to burn flowers of sulphur at the rate of two pounds per thousand cubic feet of room space. A little alcohol will make the sulphur burn readily. Take metal ornaments out of the room or they will be tarnished by the fumes; also remove clothes, curtains, and fabrics, as sulphur is a powerful bleaching agent."

As soon as the frost kills the foliage of grape vines they may be pruned back and laid on the ground ready to be covered with earth. They should be covered before the ground freezes.

## The Grand Theatre

121 East, 2nd South.  
Salt Lake City, Utah

SUNDAY OCTOBER 17.

AND ALL WEEK

EXCLUSIVE HIPPODROME  
CIRCUIT VAUDEVILLE

THE BEST SHOW IN SALT  
LAKE FOR THE MONEY.

ALL SEATS 10c.

### FOR SALE

#### DURCO! DURCO!

Four 11 month old Boars. Fine specimens. Large bones. Good hams. Satisfaction guaranteed or money refunded. Price \$25.00 each. Four 4 month old Same characteristics. Same guarantee \$12.50 each. Order quick. All show ring winners.

GEORGE ROMNEY, JR. Utah  
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### UINTAH BASIN LANDS

160 acres all cultivatable, full water right Dry Gulch Irrigation Company, 80 acres fenced, house, well, cellar, few trees, 40 acres cultivated. District school 1 mile. Lies 3 miles north Myton. \$4000, \$2000 cash, balance terms.

160 acres, 155 acres cultivatable, full New Hope Irrigation Company water right, 50 acres Dry Gulch Irrigation water right, house and 20 acres alfalfa. District school adjoining. Situated 4 miles north of Myton. Price \$3500. \$750 down balance easy terms.

R. S. COLLETT

Roosevelt Utah

### Splendid Idaho Ranch

For lease or sale 240 acres of beautiful rich sandy loam with a good water right, located in Jefferson Co., Idaho, near town, railroad and boulevard. Will lease with privilege of buying. Will take \$100 cash to handle or equal value in city or other property.

Address, G. C. Richter,

With BETTILYON HOME  
BUILDERS CO.

240-342 Main St., Cor. P. O. Place  
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## Water Development

WELL DRILLED—ALL SIZES—ALL  
DEPTHS—WORK GUARANTEED.

Water developed for private,  
farm, municipal and irrigation  
purposes.

PUMPING PLANTS  
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DESERET DRILLING CO.  
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Salt Lake City, Utah.

"Ma," began Rugger, junior, trying for the sixth time to say something.

"Tommy," she replied sternly, "didn't I tell you not to interrupt Mrs. Cackle and me? Wait until we have finished."

"But ma, I want to say this today!"



# Methods of Raising Lambs for Market

During the past two years, 1914 and 1915, the Illinois Experiment Station has conducted experiments on raising lambs for market. The object of these experiments, which were under the direction of Prof W. C. Coffey, was to determine efficient methods of raising lambs as measured by extent quality, and to a certain extent by cost of growth.

Three methods were followed, (1) wholly within the dry lot; (2) blue grass; (3) on forage, such as rape, alfalfa, clover, etc.

These experiments have just been completed. Full results with discussion will be published later. Following is a

## Summary of Results.

Thus far our experimental experience in raising lambs has indicated several things upon which the profit or loss of growing lambs depends.

1. It is comparatively easy to spend too much on the ewes during the period of pregnancy. Early in the pregnant period there is nearly always cheap feed available upon which the ewes will thrive and gain. The more gain they make on this feed the better, for then it will not be necessary later to put on gains with high priced harvested feeds. The sheep owner who lets his ewes remain thin in flesh until lambing time may maintain them at a low cost during the period of pregnancy, but if he raises his lambs he will be obliged to pour feed into his ewes after the lambs are born. The writer would like to emphasize the importance of getting good use out of all available cheap field feeds early in the period of pregnancy. For example, corn stalks are much better fed before they have long been weathered by rain, snow, and wind. Hence they have greater feeding value in November than in January. Of course, they have some value in January and can be used then. Elsewhere, the suggestion has been made that such cheap roughages, as oat straw, may assist in keeping down the cost of maintenance during the period of pregnancy. There is hardly any doubt as to the truth of this suggestion. If silage is a cheaper feed than clover hay or alfalfa hay, it also can assist materially in keeping down maintenance costs.

2. Profits in lamb raising can be influenced by the manner of feeding after the lambs are born. Good suckling ewes have voracious appetites, and they must be fed liberally for at least four weeks after the lambs are born in order to supply them with milk. At this time they should have a liberal amount of grain, but after the lambs become old enough to eat grain well, it is better to reduce the grain fed to the ewes somewhat and allow the lambs all they will take. The heavy consumption of feed by suckling ewes has something to do with the time the lambs should be born. In the Middle West, the earlier a lamb is born, the better it seems to thrive. It gets large and strong and able to withstand the attacks of stomach worms by the time grass comes better than does the later born lamb. But when such a lamb and its mother are confined to the dry lot and are fed on high priced feeds for

a long period, the cost of production is likely to be greater than with the later-born lamb.

From our experiments during the past two years it would seem that this year the lambs were born at about the right time (average birth date was March 16). That is, the lambs went to the blue grass in about five weeks after they were born and to rye in about two weeks after birth. Last year the time between date of birth and date of going to pasture was considerably longer and the heavy consumption of feed in the dry lot during that comparatively long period was a noticeable factor in causing high cost of production.

3. Evidently many lambs growers fail to get their lambs to eating grain soon enough. Lambs will begin to eat when less than 21 days old. The writer has succeeded in getting purebred Shropshire lambs to eat grain when only 12 days old, but the lambs from the Western ewes in our experiments were a little slow to take grain. Nevertheless, those of the 1915 crop were eating appreciable quantities between their third and fourth week. If a lamb, born in the middle of March is to arrive at marketable weight by July 1 or 15, it must be busy at feeding from the first days of its life.

4. Careful attention to small details amounts to a great deal in making lamb raising pay. A lamb must be born right, which means that it must be born alive, and strong, and have a real fount of milk available. A little slip or mistake here and there may cut the percentage of lambs saved to such a point that the hope for profits is handicapped. In our first experiment, for example, very few twins were born, a lamb or two came unexpectedly out in a cold shed, and a few others died because of accidents. Therefore, when the tails were cut and the count made, we had less than a 100 per cent crop. Then, because of rainy, muggy weather at castration time a few of the lambs were severely set back by the operation, and this further limited the chances for profits. In the second experiment, a larger percentage of lambs were born, the accidents of the former year were avoided, and hence the outlook for profits was better than the year before from the very start.

5. Evidence thus far seems to indicate that forage crops should have a place in the scheme of lamb raising in the corn belt. But evidently some forages are better than others. Although we have not used spring oats as forage in the experiments under review we have tried this crop and think it too soft and sappy to be favorably considered. We have also tried Canadian field peas, and we have had difficulty in getting enough of the peas to grow. We think we have used good seed, but this region is perhaps too far south for the Canadian pea, and further, pigeons destroy so many of the plants just as they are coming through the ground.

Rape is a forage which grows well on fertile soil, and it has a high feeding value. In the writer's opinion it is almost useless to sow it on depleted or poor soil unless the soil has been

well fertilized. "A small fertile area to rape" would seem a good motto in handling this crop. Of the forage crops sown in the spring of the year in which they are to be used, the writer knows of no other that excels rape.

Alfalfa has a high feeding value as a forage. If it did not cause bloat, it could be given unqualified recommendation. (We have never lost a lamb from bloat during its suckling period.) It is thought, and not without foundation, that pasturing shortens the life of an alfalfa field, but we have found that sheep can be run on alfalfa without doing serious damage to it.

Common red clover is an excellent forage. It may cause some bloating, but seldom enough to prove fatal.

Sweet clover has many advocates now who think it valuable in diverse ways. And it may be a good sheep forage. Its advocates declare that it will not cause bloat and this together with the fact that sheep will eat it makes it deserving of a trial in the forage scheme.

Rye is a forage concerning which there are conflicting opinions. In our experience we think it a splendid forage for early spring. The secret of getting a great deal from it lies in keeping it cropped close. As the spring advances it seems to become less palatable to sheep and it will not do to turn them on some other green feed in the hope of bringing them back to the rye later. If there is a normal rainfall, the area devoted to rye can be turned under late in May and seeded to soy beans or cow peas, and with either a good crop of forage or hay can be secured. If the rainfall is scant, however, the rye will have drawn on the moisture in the ground to such an extent that the later forage crops will not make a heavy growth.

Soy beans and cow peas do not come on early enough to be utilized by lambs intended for summer market. Of the two forages the soy beans are much more palatable to sheep.

From further experimentation we hope to gain an idea of the value not only of forages not yet used but also of various combinations of forages and of forage combined with pasture.

## MARKETS.

The wheat market remains fairly strong all over the country, owing to a good milling demand and some export business. Farmers are holding their crops for better prices. December options are lower now than at any previous time, but the prospect is that the price will not go below the present figure. Oats are not so strong, as there seems to have been an extra heavy production of this grain. The crop was somewhat short on barley and rye, but the demand for these will grow from this time on, according to a grain authority. Wheat prices are down slightly, ranging from \$1.35 to \$1.40 per cwt.

Following are the latest Salt Lake quotations:

Wheat, \$1.35@1.40 cwt.  
Oats, \$1.20 cwt.  
Barley, \$1.05 cwt.  
Rye, \$1.30 cwt.  
Timothy, baled, \$13.50 ton.  
Potatoes, 70c cwt.

The branches of currant bushes should be drawn close together and tied to prevent the snow from breaking them down.

## CLEAN WATER AND HOW TO GET IT ON THE FARM.

In this age of germs it is well for the farmer to realize that his water supply for domestic use may be dangerously polluted, and that the clearest and most sparkling water may contain millions of the invisible and deadly germs of typhoid fever or other intestinal disorders.

Methods for safeguarding the purity of farm water supplies are being given more and more attention by progressive farmers, and the value of clean water from the standpoint of health is now recognized. The rural inhabitant, therefore, realizing his obligation to his family and to himself in this respect, should see to it that clean and wholesome water is provided for household uses. This necessitates, in the main, the use of effective measures for protecting wells, springs, and other sources of farm-water supplies from surface and subsurface pollution, and that, above all things else, clean well surroundings be maintained. Further, to avoid trouble in the future, a spirit of constant watchfulness and care with reference to maintaining the purity of the water supply may well be developed.

In addition, simply, economical, and practical means of obtaining running water in the house have been found, which, when properly and carefully installed, do away with much of the drudgery formerly borne largely by the farm housewife.

The farmer of average means can not afford to overlook the advantages offered by these more modern methods and arrangements for securing running water in the house, and when the expenditure in time and energy for carrying water is compared with the actual cost of installing the cheaper and simpler means of providing a convenient water supply in the house it is believed a step in this direction by even the less well-to-do farmer would be, in the long run, a decided saving and advantage.

## MORE FELLOWSHIP FOR FARMERS.

It is not the hard work or the exposure, or even the poverty, of the farmer or his wife which makes farm life so unattractive to so many of our people. It is the lack of teamwork. I have never known men and women, particularly young men and women of our race, to shrink from hardship if they could feel the touch of elbows and have the sense of comradeship which the soldier has. Our boys and girls, as well as the men and women, of the farm should develop teamwork. They should get together and work together for a common cause, as the soldiers. Touch elbows with your neighbors and get the sense of comradeship, as soldiers do.—Dr. T. N. Carver.

A young man who last June, received his diploma, has been looking around successively for a position, for employment and for a job. Entering an office, he asked to see the manager, and while waiting he said to the office boy.

"Do you suppose there is any opening here for a college graduate?" "Dere will be," was the reply, "if de boss don't raise me salary to tree dollars a week by to-morrer night."

Store onions in a cool, well-aired place.



## Sycamore Win Prize For Largest and Best Shade Tree

In a contest recently conducted by the American Genetic Association it was decided that the Sycamore was the largest shade tree in America.

The bestowal of the prize on a sycamore at Washington Indiana, which is 42 feet 3 inches in circumference and 150 feet tall, draws attention to the fact that foresters are nowadays recommending the species especially for city planting. They say that long experience with sycamores planted in city streets has shown that the species is peculiarly able to withstand the smoke, dust, and gases which are usually and unavoidable complement of urban life. In addition, the sycamore is as resistant to attacks of insects and fungi as almost any species, and is a quick grower; at ten years of age, a healthy sycamore usually is already large enough for shade as well as for decorative purposes. As for the latter, there is hardly any eastern species which is generally held so picturesque as the sycamore. With its strikingly mottled bark and magnificent stature and conformation, the sycamore has a marked individuality and can not be mistaken for any other species, either in the summer when the foliage conceals its structural form, or in the winter when the leaves are absent.

A common objection to the sycamore as a lawn tree is its habit of dropping its leaves before autumn. From this characteristic it is sometimes called a "dirty tree." Recently the Forest Service received a letter from a suburban resident who has a sycamore on his lawn. "My sycamore tree is very beautiful," said the writer, "until about the first of August, when its leaves begin to fall. Is there any remedy that I can apply to the tree to keep it from dropping its leaves so soon?" It was necessary to tell the correspondent that this was a characteristic habit of the tree. This drawback, however, is practically the only failing that the sycamore has, and it is offset by many desirable qualities.

On the other hand, there is little prospect of popularity, foresters say, for the valley oak of California, which was decided to be the largest nut-bearing tree in the United States, the contest unearthing a specimen in San Benito County, which is 37 feet 8 inches in circumference and 125 feet high. The valley oak is a very beautiful tree, but it attains maturity only after three or four hundred years; its wood is too tough, knotty, and otherwise imperfect to be good for lumber; the tree grows too slowly to be planted for shade or decorative purposes, and being found only in California, it would have a small field of usefulness. Horticulturists say the valley oak is not popularly considered a nut-bearing tree; for its acorns are not generally used for food, although, of course, they are edible. Foresters say that the chestnut and the black walnut are the largest nut-bearing trees in this country, and the contest did, in fact, unearth a chestnut near Crestmont North Carolina, which is 33 feet 4 inches in circumference and about 75 feet tall.

The contest brought forth photographs and authentic descriptions of 337 trees in all parts of the United

States, making a distinctly valuable contribution to existing knowledge of native trees. It was found that, in all probability, there is no living elm larger than "The Great Elm" at Wethersfield, Connecticut, which is 38 feet in circumference and about 100 feet tall, and is estimated to be 250 years old. Many remarkable specimens of species which ordinarily attain only small sizes were unearthed by the contest, furnishing new records of maximum growth. A sassafras was brought to light at Horsham, Pennsylvania, which is 15 feet 10 inches in circumference at four feet from the ground, whereas, for example, not long before this a Georgia town claimed that it had the largest sassafras tree in the world, though this tree was only something over 7 feet in circumference. A white birch was found in Massachusetts with a girth of 12 feet 2 inches; a pecan was found in Louisiana with a circumference of 19 feet 6 inches, and a catalpa in Arkansas with a girth of 16 feet. The tallest tree found in a yellow poplar in North Carolina, which is 198 feet high and has a circumference of 34 feet 6 inches.

The value of the contest lies in its contribution of new information as to the maximum growth attained by deciduous species and the localities in which the different species seem to grow best. The relative sizes of the coniferous species are fairly well established, the Big tree of California for example, being the largest in the world; but information on the size attained by deciduous trees in this country has been very incomplete.

### THE VALUE OF STABLE MANURE

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Arthur—"I can support you in the style to which you have been accustomed."

Evelyn—"Won't do. I'm not satisfied with the style to which I've had to be accustomed."

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At a Tri-County fair held at Jerome, Ida., I took all but one second. I have anything wanted in Chesters from a weaning pig to a champion boar or sow at prices all can afford. High class stock. Write me.

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LEHI, UTAH

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If you have some pure bred stock and want to sell them, why not use a little advertisement on this page? It will bring results. Try it.

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About 15 head of well graded Short Horned Durham Cattle.  
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Shoates—Registered 10 month Berkshire Boar and bred sow to farrow end of September.

**JOHN F. OLESON**

R. D. No. 3 Murray, Utah

## FOR SALE

10 Good Grade Milch Cows.  
McKay Farm, Huntsville.  
Telephone Huntsville, 18 J, or  
Ogden No. 1407.

Wanted to hear from owner of good farm for sale. Send cash price and description. D. F. Bush, Minneapolis, Minn.

## FOR SALE

Foundation Stock in Holstein Fresian's and Duroc Jerseys. Will exchange a few for hay or grain. For breeding and particulars write  
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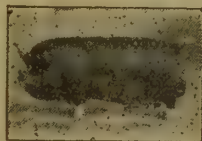
We can offer large thrifty bulls from R. M. dams with official tests from 400 to 500 pounds of butter with first calf mated to heifers which we will sell in lots of 5, 10 or 20. Write for prices.

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**MOUNT OGDEN STOCK FARM**  
**A. C. ANDERSON**

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## WILLOW TREE STOCK FARM

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Males or females 2 to 3 months old. Selected from the Masterpiece Premier Herd. \$10 a piece. None better. Why pay more.



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One team percheron colts weigh 13-14 hundred, well broke and good workers. Coming 4 year old.

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WANTED—Good farm; well located; possession next Spring. Give price and description. W. Whitman, Box 754, Chicago.

## IF YOU WANT A BARGAIN "SEE ME."

92 acres near good town in Idaho house, stable, 50 acres under cultivation, first-class water right for 35 acres. Take it for \$2600, half cash, balance 18 years 6 per cent.

100 acres Sevier county; 4-room stable; part in alfalfa, balance good beet, grain and pasture land; good water right: 1 mile from beet dump. Would also make ideal dairy and stock farm; land near selling for \$100 to \$300 per acre. Cheap at \$4500; \$1500 cash, balance easy.

160 acres first-class land with water right near Preston, Idaho, \$55 per acre; terms or take part city property.

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On improved farms with primary water rights, at reasonable rates."

## INTER-MOUNTAIN LIFE INSURANCE CO.

11th Floor Boston, Bldg.  
Salt Lake City, Utah.

"Don't you and your wife ever contend for the last word?"

"No," replied Mr. Meekton, glumly; "there isn't any such thing. I simply close the sliding doors."

## PRODUCE INFERTILE EGGS.

Fertile eggs cost the farmer an enormous sum each year. Farmers lose millions of dollars annually from bad methods of producing and handling eggs. One third of this loss is preventable, because it is due to the partial hatching of fertile eggs which have been allowed to become warm enough to begin to incubate.

The rooster makes the egg fertile. The fertile egg makes the blood ring. You can save the money now lost from blood rings by keeping the male bird from your flock after the hatch-in season is over.

The rooster does not help the hens to lay. He merely fertilizes the germ of the egg. The fertile germ in hot weather quickly becomes a blood ring, which spoils the egg for food and market. Summer heat has the same effect on fertile eggs as the hen or incubator.

Infertile eggs will not become blood rings. After the hatching season cook, sell, or pen your rooster. Your hens not running with a male bird will produce infertile eggs—quality eggs that keep best and market best.

Heat is the great enemy of eggs, both fertile and infertile. Farmers are urged to follow these simple rules, which cost nothing but time and thought and will add dollars to the poultry yard returns:

1. Keep the nests clean; provide one nest for every four hens.
2. Gather the eggs twice daily.
3. Keep the eggs in a cool, dry room or cellar.
4. Market the eggs at least twice a week.
5. Sell, kill, or confine all male birds as soon as the hatching season is over.

Valuable published information on the raising and care of poultry and eggs and individual advice on these subjects may be obtained by writing to the Bureau of Animal Industry, United States Department of Agriculture, Washington, D. C.

## LITTER MATES.

A southern sow had eight pigs and could only nourish seven of them at a time. Rather than let the odd pig starve, it was given to a little girl, who raised it by hand. She joined the County Pig Club as a ham and bacon member, and kept close record of the feed given and weights of her pig, which was not a pure bred.

When the pig was 10 months old, it was killed according to the instructions sent her. It weighed 225 pounds net when dressed as meat and yielded also a 50-pound can of lard. The pig cost less than 5 bushels of corn to produce, as it was raised on kitchen waste in addition to the corn.

The other seven pigs raised by the mother and left to rustle with her were killed at the same time and averaged only 87 pounds net when dressed as meat.

The instance shows how liberally the pig will repay proper care and feed by gaining rapidly in weight.

"I hear the sea captain is in hard luck. He married a girl and she ran away from him."

"Yes; he took her for a mate, but she was a skipper."



## Save More

By I. D. O'Donnell.

The idea uppermost in the minds of the farmers and those having to do with farming in this country may be expressed by the phrase "grow more." The agricultural papers, the agricultural teachers, and those perpetual advisers of the farmer—the bankers—are spreading the gospel of "grow more" in a way that gladdens the hearts of the concoctors of commercial fertilizers. It is true that the man who makes two blades of grass grow where one grew before is a public benefactor and the ambition to increase the rate of production on our farms is a commendable ambition. But growing more is not a panacea which alone will cure all the farmers' troubles. It is admitted that increased production is the basis of prosperity on the farm, but coupled with the idea of "grow more" should be the principle of "save more."

It is not always the farmer who produces the heaviest crop yield per acre and who keeps the largest numbers of live stock who is the most prosperous farmer. We all know men who produce but ordinary crop yields and keep but a small number of farm animals, yet they prosper—they live well and not in a hurry. The principal difference between these two types is that one is a producer only while the other has mastered something of the art of saving. The secret, which is not a secret, of continuous prosperity on the farm is "save more."

The significance of the phrase "save more" should not be restricted to the

misery hoarding of money. "Save more" properly includes the planning of the farm work and business to the end that the best possible use is made of the labor, equipment, and produce of the farm. The principle of "save more" may in part be stated by "don'ts:"

Don't try to farm 160 acres when you can better farm 80 acres.

Don't sacrifice quality for quantity in crops or live stock.

Don't feed good quality feed to poor quality live stock.

Don't feed high-priced feed to live stock and then leave the live stock unsheltered in all kinds of weather.

Don't hire help to raise crops that don't pay for the raising.

Don't hire help and then fail to furnish the help with suitable tools and implements with which to earn wages.

Don't buy good tools and implements and then fail to properly care for and shelter them.

This list of "don'ts" might be added to until it be doubled many times, and yet the principle of "save more" would not be entirely expounded.

I have read of a club or association of farmers which was called the "No Wasters." The idea of this club was to prevent waste of all kinds on the farms of the members of the club. The farm of each member was visited by the club and causes of waste pointed out and remedies suggested. Think of what could be accomplished by such an organization, and there is need for just such an organization in

each farming community.

By all means try to "grow more." Don't be satisfied with ordinary yields, but remember that net results are what count, and to make the net result for each year right you must continuously and vigorously "save more."

### "ONCE OVERS"

"I can't help thinking what sport it would have been if 'Paw' had been born a little boy so he could play with me."

This is the complaint of a little lad whose father feels that it is time wasted to play with the little man in his home.

Too many of us have this opinion.

We think that the children should sit quietly when we reach home at night, and that we must not be disturbed unless the fancy takes us to chat with the kiddies.

When revelations of the sort quoted are confessed by a child, the father cannot expect the joyous welcome home that he might receive, if the homecoming were a signal for "some fun?"

Fun. That is all there is worth while in the opinion of the youngsters.

They are bound to get fun somewhere. So be such a good pal of that boy of yours that he won't be compelled to seek his good time with another boy's father—or, worse, with companions of whom you would not approve.

Strive to give your child this, the greatest of all advantages—a thorough training.—Exchange.

A number of lads were gazing longingly at the outside of the travelling menagerie and eventually one of them, bolder than the rest, got

down on his hands and knees and pushed his head under the canvas. He was enjoying himself immensely, when the manager came along and pulled him out saying:

"Do you know what we do with boys like you? We make meat of them for the lions. Here, Peter, throw him into the lion's cage."

But the boy was equal to the emergency. "Look here, guv-nor," said he. I tell yer what. Le me see the show for nothing, and I'll have all the fattest boys in the place a-crawling under the canvas to-morrow night."

The commanding officer of a certain regiment was much troubled about the persistent untidiness of one of his men. Reprimand and punishment were alike in vain.

Then a bright idea struck the colonel.

Why not march him up and down the whole line of the regiment and shame him into decency?

It was done. The untidy warrior, who happened to be an Irishman, was ordered to exhibit himself and march up and down the entire regiment, and the men were told to take a good look at him.

After the ordeal was over the unabashed son of Erin halted, saluted the colonel, and said in the hearing of the whole corps:

"Dirtiest regiment I ever inspected, sorr."

Helen—"When I grow up and get married I'm going to have a lot of children."

Mary—"I'm not; I'm going to marry a bachelor."

# The Inter-Mountain Rural Credit Association

(INCORPORATED)

A co-operative organization of Utah and Idaho farmers for FINANCIAL BENEFIT. Assures relief from present conditions. Allows the farmer through co-operation to utilize his credit to the very best advantage.

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# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region

OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE

VOLUME XII; No. 12

LEHI AND SALT LAKE CITY, UTAH

OCTOBER 23, 1915





# To Every Reader of the Utah Farmer

COMMENCING WITH THIS ISSUE WE ARE MAKING A NUMBER OF changes in the Utah Farmer. You will notice a number of improvements in the make up or arrangement of the paper. We plan to have a feature article to run on the third page each week, something worth while. Have made arrangements for a series of articles on Drainage, Farm Machinery, The Potato, its disease control and cultivation, Cheese Making, Irrigation by means of small pumping plants, and other timely subject. Besides these feature articles we will have our regular departments of Dairying, Orchard and Garden, General Agriculture, Livestock, The Home, Poultry and the Questions and Answers.

A better quality of paper will be used in printing the Farmer. This we are sure, will be appreciated by both our readers and advertisers. We now have as our subscribers about half of the farmers of the State but we are not satisfied. We plan to secure five thousand new friends for the Utah Farmer. The very fact that the greater part of our readers renew their subscription year after year is evidence that they like the paper. Now we want you to help us. We want other farmers to have the benefit and help of the good things that come each week in the Farmer. Say a good word to your neighbor and tell him about the paper, let him see this new copy. Just think of getting eight hundred and thirty two pages of reading matter for \$1.00. Less than two cents a week.

Now we suggest that you send in your own renewal and then help get one new subscriber. This will be helping us and also helping you. Every farmer, dairyman, and poultryman, who is ambitious to increase his efficiency and income, should renew his subscription to The Utah Farmer.

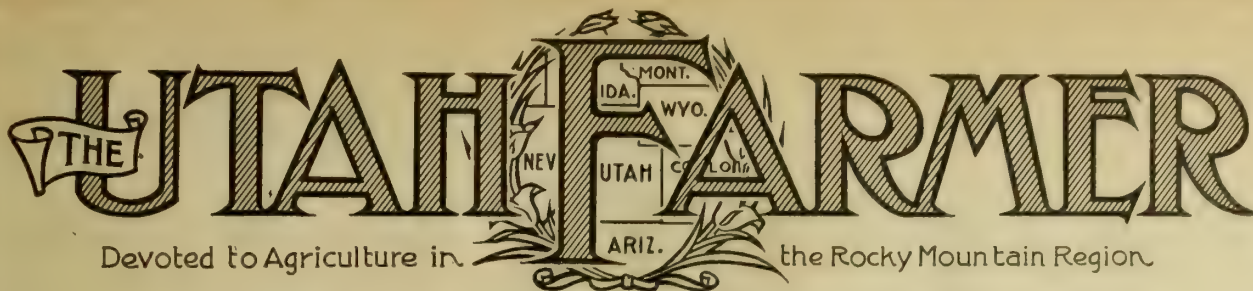
BE A FARMER AMONG FARMERS—Do you want to get ahead—succeed—make more money? Don't you think there are branches of your business that should pay you better? Don't you think it a good plan to be more than an ordinary farmer? Be a farmer whose work of each day puts him farther ahead and for whom the future is promising. Forge ahead by capitalizing the experiences of other successful farmers—men who have done big things in farming—who have made two spears grow where but one grew before. The Utah Farmer will give you the crystalized experiences of such men—will keep you posted on their up-to-date money-making methods and systems. We deal with local conditions. The best writers in this State are contributing to the Utah Farmer. We are for the farmers of this State, we have gained their respect and confidence by helping them. Will you let it help you to be a farmer among farmers—a real farmer—one whom your neighbors will look to for advice and counsel on farm subjects.

We hope you will show your appreciation of the new changes and improvements by renewing today and helping to secure a new subscriber. A gift or premium will be sent if you attend to this matter today—right now. This will express our appreciation for your prompt action. Address all your letters to the Utah Farmer, Lehi, Utah.



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VOLUME XII.

LEHI, UTAH, SATURDAY, OCTOBER 23, 1915

No. 12

# Farm Management Demonstrations

By E. B. Brossard, State Farm Management Demonstration Agent.

THE science of farm management is the economics of the farming business, and as such it deals with the greatest problem in the development of any common-wealth. It appeals strongly to all practical men. There are certain definite principles of economics which govern all business enterprises. The banking business is governed by economic principles. Manufacturing is governed by economic principles. Just as banking and manufacturing are governed by certain definite laws of economics so also is the business of farming. Supply and demand regulate the farm business in the same way that they do the manufacturing business. It is universally recognized that the question of Markets is more important in the business of farming than it is in the business of manufacturing steel rails.

## History of Farm Management Demonstration Movement.

The past ten years has developed the science of farm management very much. The movement in the scientific world was so practical a step that by almost spontaneous action the farmers of the country become extremely interested in the work. The popular demand for the work from the many thousands of individual farmers resulted in the U. S. Department of Agriculture taking it up as a phase of Extension Work. In July 1914 at a meeting of the Presidents of Western Agricultural Colleges, Directors of the Extension Divisions of the Western Agricultural Colleges, and officials of the U. S. Department of Agriculture held at Denver, Colorado, an agreement was reached by which the U. S. Department of Agriculture co-operating with the State Agricultural Colleges could place in the field management demonstration agents. The expense of the work to be divided between the co-operating parties. As a result the State of Utah took advantage of this very helpful co-operation and placed a Farm Management Demonstration Agent in the field, as an extension specialist in Farm Management.

## Co-operating Parties in Farm Management Work in Utah.

The Farm Management Demonstration agent co-operates very closely with the U. S. Department of Agriculture, the Utah Agricultural College through the Director of Extension, Dr. E. G. Peterson; the Utah Agricultural Experiment Station; the various County Agents throughout the State; and their leader Dr. R. J. Evans; and with the respective farmers of each County included in the areas of which surveys have been made. The sup-

port this work is receiving in this State and the hearty co-operation which has been so happily arranged, speaks volumes for the future of the work in the State of Utah, and assures great usefulness to the farmers of the State.

## Purpose of the Farm Management Demonstrations.

The purpose of Farm Management Demonstrations is two-fold: 1st. To demonstrate to the individual farm-

typical of a large portion of the respective counties and other parts of the State.

## Records Taken in Each of Three Representative Counties.

Up to the present time there have been three demonstrations completed. One each in the following areas: Hyde Park Area, Cache County, Sandy Area, Salt Lake County, and Hinckley Area, Millard County.

Fifty-three records were taken in

being true, the records may be taken as the basis for scientific investigations and the information contained therein may be relied upon for all practical purposes. The law of averages is in many cases more accurate than individual scientific measurements. Dr. G. F. Warren of Cornell University says that the average of the estimates of eighty farmers has less "probable error" in it than records kept of crops and farm business by other scientific methods. This being true the averages as they were compiled for these three Areas of which farm surveys have been made can be relied upon, as being definite information about the actual conditions.

## Records of one Area are not Comparable with Another.

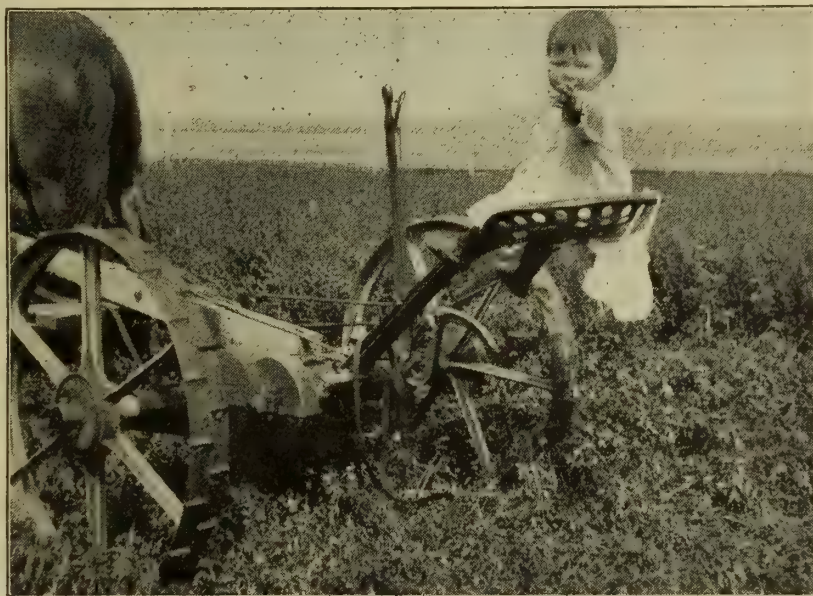
It must be understood that the records of one area, in which a survey has been made are not comparable with those of another area, unless climate, soil, markets, irrigation waters, etc., etc., are the same, which is very rare. It would not be fair to compare one record with another because of the difference in land values. One type of Agriculture might be very successful and pay good profits on cheap land, yet on expensive land fail to pay interest. The average value per acre of all farm land, whether improved or not for the three areas surveys varies as follows: Salt Lake County \$122.83, Cache County \$105.90, Millard County \$45.83.

The results of each survey therefore, form a distinct unit and can be used only in those particular communities where climate, soil, markets, and the many other factors entering into the farm business are alike. When conditions are quite similar, as they would be in any one small community the question of profits, which is largely a question of Farm Management becomes easily demonstrated.

## Labor Income Chosen as Measure of Farmer's Managing Ability.

The Labor Income is the best measure of a farmers managing ability. It is obtained by subtracting from the Gross Farm Receipts the sum of the Total Farm Expenses and five per cent interest on the capital invested in the business. LABOR INCOME is what the farmer receives for his years wages for managing his farm. Labor Income is not Comparable to a City Salary.

The Labor Income of the farmer cannot be compared to the salary of a man living in the city, because, besides the farmers Labor Income he gets all that the farm produces towards the family living, i. e.—house to live in, milk, butter, meat, eggs,



LEARNING THE FARMING BUSINESS EARLY.

ers certain Efficiency Factors which effect the farm profits, with a view of increasing the net income of the farm and 2nd. To increase the efficiency of the County Agricultural Agents.

## Plan of Demonstrations in Utah.

The work begun in Utah in January 1915. Seven Areas in as many counties of the State were chosen for the purpose of making demonstrations. Farm Survey Records were taken in each of these respective areas in sufficient numbers so that conclusions could be demonstrated by taking the averages for the various areas. These areas were chosen for the following reasons:

1. There was a County Agricultural Agent employed in the counties chosen, who could assist in taking the records and in doing "follow-up work."
2. Those counties were selected which typified the farming of the State of Utah.
3. The specific area in each county of which a survey was made was chosen because of the fact that the climate, soil, and general type of agriculture found in the specific area was

the Hyde Park Area, Cache County.

Seventy three were taken in the Sandy Area, Salt Lake County, which included the following townships: Sandy, Draper, Crescent, Riverton, Midvale, Union, and one or two records from South and West Jordan. Sixty records were taken in the Hinckley Area, Millard County. The records were checked very carefully by the men who took them from the farmer so that no inaccuracies could enter. Any inconsistencies found in the records were checked over with the farmers and corrected.

## Records are Accurate and Definite Information Concerning Actual Conditions.

The records were brought to the Agricultural College for calculation. Each step in the "working up" of the records was checked very systematically allowing no errors to slip by. According to experiments which have been published by the U. S. Department of Agriculture, the "probable error" in farm survey records, such as these in this State, is very small, being less than one per cent. This



vegetables, fruits, etc. This of course is to the advantage of the farmer since he raises practically all of his living on the farm.

#### Record of Hyde Park, Cache County Farms. For the Year Ending January 1, 1915.

The records of the Hyde Park Area were taken by E. B. Brossard, Farm Management Demonstration Agent; Dr. R. J. Evans, State Leader of County Agents and the following County Agents: Mr. H. J. Webb, of Salt Lake County, Mr. J. P. Welch of Millard County, Mr. L. A. Merrill, Sevier County, Mr. R. H. Stewart, of Carbon-Emery County, Mr. H. A. Christiansen, Beaver County, Mr. M. L. Harris of Wasatch and Duchesne Counties and Mr. A. B. Ballantyne of Utah County.

A statement of Capital, Receipts, and Expenses on the average of the ten best paying farms of Hyde Park Area, Cache County, is as follows:

Total Capital Invested	\$19,816.00
Total Farm Receipts	\$ 4,133.00
Total Farm Expenses	\$ 1,145.00
Total Farm Income	\$ 2,988.00
(Receipts minus expenses)	
Income from Capital	\$ 991.00
(5% interest on Capital)	
LABOR INCOME	\$ 1,997.00

This Labor Income of \$1,997.00 is exceptionally good. It is one of the best showings made in the areas thus far surveyed in the United States. The average labor income on all 52 farms in the Hyde Park area was \$946.00. This shows a very profitable farming community.

There are definite reasons why the farmers in the first group who averaged \$1,997.00 labor income made \$1,051.00 more money than the average farmer of the community. In order to demonstrate these reasons, tables were made showing the Size of Business, Quality of Business, and Diversity of Business.

1st, of the individual farm. 2nd, of the average of all 52 farms included in this area.

As measures of Size of Business the following were used, "Total Capital," "Total Receipts," "Total Crop Acres," "Total Number Acres in Sugar Beets," "Total Number milch cows," "Total Number Work Horses," and "Total Productive Animal Units."

As measures of Quality of Business the following were used. "Milk Re-

ceipts per cow," "Cattle receipts per head," "Net live-stock receipts per productive animal unit," "Net live-stock receipts per \$100 feed fed," "Crop Receipts per crop acre," "Crop yields per acre," of the following crops. Potatoes, wheat, oats, barley, alfalfa, other hay, and sugar beets. The quality of work was shown in the "Productive Animal Units per man," "Crop acres per man" and "Crop acres per horse."

The Diversity of Business was shown by demonstrating "The number of crops grown," "Number of sources of income over eight per cent of the gross receipts" and "The sources of income over eight per cent of the gross receipts."

#### Quality of Business on Farms of Hyde Park Area, Cache County.

It was found that the crop yields on the average farm and the average of the ten best paying farms was practically the same. Each man on the average of the best paying farms took care of 3 more "Productive Animal Units per man" than the average farmer. Does not include work horses. One animal unit is one cow, bull, steer, or two young cattle, one horse, two colts, seven sheep, lambs, five hogs, ten pigs or one hundred poultry, figured on the basis that each animal unit requires the same amount of feed as determined by investigations. He took care of 19 more "Crop Acres, per man, and his horses cultivated, harvested etc., 5.4 more "Crop acres per horse." This showed that his man and horse labor was more efficient.

The quality of stock was practically the same, there being but \$6.00 "milk receipts per cow in favor of the better farmer. In "Net Live Stock Receipts per \$100 feed fed" the better paying farmer got \$120 while the average farmer got but \$107. Since the "Net Livestock Receipts per unit" were practically the same, this figure shows better management in feeding "Live Stock" and perhaps a little better quality of live-stock on the better paying farm.

#### Diversity of Business on Farms of Hyde Park Area, Cache County.

The better farmer had one more source of income than the average which equalled 8% of his total Gross Receipts. His main sources of income were as follows: Sugar Beets; \$1,075.00, Grain \$891.00, Creamery

	Average of 10 better paying farms.	Average of all 52 farms
Total Capital	\$19,816.00	\$13,741.00
Total Receipts	4,133.00	2,506.00
Total Crop Acres	105.00	54.00
Total No. Acres in Sugar Beets	12.8	8.5
Total No. Milch Cows	10.1	7.5
Total No. Work Horses	5.6	5.8
*Total Prod. Animal Units	23.4	14.2
LABOR INCOME	1,997.00	946.00

milk \$597.00 and Cattle \$356.00. The average farmer had from sugar beets, \$705.00, grain \$302.00 and Creamery milk \$400.00. His receipts from cattle did not equal 8% of his total gross receipts. This shows an advantage in diversity of business that the better farmer had over the average farmer in the Hyde Park Area of last year. He had Receipts from cattle as are of his main sources of income in addition to the other three sources. The number of crops grown were practically the same, being just a trifle in favor of the better farmer.

#### Size of Business on Farms of Hyde Park Area, Cache County.

The size of business seemed to be

## Reliable Farm Bargains

which we have personally inspected and can highly recommend. These farms are income producers.

40 acres, near Tremonton, in the great Bear River Valley. Full water right. All in the highest state of cultivation. Near good school, good roads, railroad and good social conditions. Big crops are a certainty in this beautiful district. Price complete, \$115 per acre. Ten years to pay. Interest at 6%.

160 acres near Rigby, Idaho, in the Snake River Valley. Excellent soil, no gravel. 300 inches water. House, stable and other outbuildings. 100 acres under cultivation. Balance can be cultivated. Share of this year's crops goes with the place if taken at once. Only \$55 per acre, on easy terms.

240 acres, 2 miles from railroad station at Rigby, Idaho. Good soil. 300 inches water, 4 room house, stable and other outbuildings. All necessary farm machinery. Share crops goes with place if taken at once. Only \$41.50 per acre, on easy terms.

360 acres near Blackfoot, Idaho. 200 acres can be cultivated, balance good pasture land. Good sandy loam soil, ample free water, house, stable and other out buildings. Exceptional bargain at \$8,000. Will exchange for Salt Lake City property.

6½ acres at 15th South and 3rd East streets, near Salt Lake City. Substantial 7-room house, two large chicken houses five flowing wells, shade trees and fruit trees. An excellent fruit and chicken ranch. Only \$3100. One-tenth of purchase price down; one-tenth each year. More land can be included if desired. A bargain!

We trade farms for city homes.  
Write, phone or come in.  
Phone—Wasatch 963.

## Kimball & Richards

56 and 58 Main Street.

Salt Lake City, Utah

the greatest economic factor which contributed in 1914, to the larger Labor Incomes of the Hyde Park Cache County farmers. The following is a statement showing the comparison of the Size of Business.

	Average of 10 better paying farms.	Average of all 52 farms
Total Capital	\$19,816.00	\$13,741.00
Total Receipts	4,133.00	2,506.00
Total Crop Acres	105.00	54.00
Total No. Acres in Sugar Beets	12.8	8.5
Total No. Milch Cows	10.1	7.5
Total No. Work Horses	5.6	5.8
*Total Prod. Animal Units	23.4	14.2
LABOR INCOME	1,997.00	946.00

\*Does not include work horses. One animal unit is one cow, bull, steer, or two young cattle, one horse, two colts, seven sheep, fourteen lambs, five hogs, ten pigs or one hundred poultry, figured on the basis that each animal unit requires the same amount of feed as determined by investigations.

This table shows that the better paying farm had a larger capital. Its total Gross Receipts were almost 3-5 greater. It had almost twice as many acres into crops, and had 4.3 acres more in sugar beets despite the fact that the average yields of sugar beets per acre were exactly the same. It had 2.6 more milch cows. It cultivated almost twice as many

"And the rain descended and the floods came and the winds blew and beat upon that house and it fell not, for it was founded upon a rock."

When storms come, will they find your future on the solid financial foundation of a healthy bank account?

Prepare NOW by opening a savings account with this solid old bank, and build it steadily.



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We are the largest Raw Fur house in the World. Our customers are the most successful trappers in America. Our Trapper's Supply Department furnishes outfits at ridiculously low prices. For example, we sell steel traps 40 per cent lower than others, ask for them. Send name.

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**Furs Have Advanced**

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**ROGERS FUR COMPANY, Dept. 444 St. Louis, Mo.**



acres of land, yet it had fewer work horses and it had 9.2 more Productive Animal Units than the average farm. The receipts per Proactive Animal Unit are exactly the same in the tabulation. These figures show conclusively that it was the Greater Number of Animal Units, rather than the quality of livestock, which contributed toward the larger Labor Income. It is shown definitely in this report that the larger number of acres cultivated increased the efficiency of man and horse labor, and that a greater number of acres being cultivated reduced the cost of cultivation per acre.

**Most Important Points Demonstrated To Hyde Park Farmers.**

The points emphatically demonstrated to the Hyde Park farmers were as follows: 1st. That size of business was the greatest factor contributing towards the larger labor income. 2nd. That the best diversity of business for 1914 was to have four main sources of income which were equal to 8% of the Gross Farm Receipts. These sources on the average better paying farm were: Sugar Beets \$1,075.00. Grain \$891.00, Creamery milk \$597.00, Cattle \$356.00 and 3rd. That good quality of business must be maintained.

The suggestions made to the average farmer were; to increase size of business by some of the following methods depending upon the conditions on the individual farm. 1st. Increase the number of "Crop Acres," 2nd, increase number of acres in sugar beets. 3rd, increase the "Number of milch cows, or 4th, keep more "Productive Animal Units" on the farm.

The conditions on the individual farm had to be taken into careful consideration before any suggestions were made, because of the many factors which enter into the organization of the farm business.

Not all large farms made large labor incomes. Some large farms lost money, but on the average the large farm made the most money. The same is true visa-versa, not all small farms lost money, nor were all small farms limited to small Labor Incomes but on the average the farmers with a small business made low labor incomes.

The above analyses of the figures given in the Hyde Park report, serves to demonstrate how the individual farm business is analyzed and how it can be dealt with in a concrete and definite way. The Hyde Park farmers have thoroughly appreciated the analyses of their farm business which has been returned to each individual farmer respectively. I am glad to state that they are giving the work hearty support. They are open minded and ready to receive suggestions, and prize very much the business statement which they have of their farm business.

(To be Continued Next Week)

**IS MILK FOOD OR DRINK?—COURT IN NEUTRAL RULING**

What is milk?  
Is it food or drink?  
You can't tell by legal decision, apparently.

Medical authorities say milk is both "atin' an' drinkin'."

This is the case of Merde vs. Beifeld, owners of the White City, a Chicago summer park corporation, and others, the contestant entering into a contract to pay 25 per cent of all

drinks dispensed under the bar privilege. Eatables were to bear no such burden.

Now a disgruntled stockholder sues the management of the park for permitting the sale of milk by the restaurant people, claiming that milk is a drink and ought to be taxed.

It is pointed out that milk sold in the bar is taxed as drink, while milk sold in the restaurant is classed as food and is free from taxation.

The Appellate Court has just decided that milk sold on the restaurant premises is an eatable, while that drawn from the wooden cow on the grounds is a drink; and therefore subject to the 25 per cent tax. It is a Solomonesque decision.

It leaves the problem just where it was in the first place.

What is milk?—Exchange.

**Agriculture Lesson XI**

**SOILS.**

The soils of the U. S. have also been divided into a number of provinces among which the following nine are the most important:

1. Glaciated.
2. Costal Plain.
3. Piedmont Plateau.
4. Residual Limestone Valley and Upland.
5. Appalachian Mountain.
6. Flood Plain of the Mississippi River.
8. High Plains Area.
9. Sierran or Soils of the Far West.

This classification is based partly on geographical considerations, but the origin of the soils and the climate conditions enter largely.

No. 1. This province is found in the glaciated region of the U. S. surrounding the great lakes. The soils within this province are not derived solely from the underlying rock formation, but are formed from materials brought there by the glacier. Within this province are the wheat and corn belts where the Moshall and Miami series predominate.

No. 2. In the Costal Plain province the soils are derived from marine sediments of recent date. The materials from which the soils are derived consist of unconsolidated clays, loams, sands and gravels. Here we have the Galveston series along the Coast line. The Portsmouth series are poorly derived areas immediately back from the Coast. The Norfolk series throughout almost the entire area.

No. 3. The Piedmont Plateau. The soils within the province are all derived from the processes of weathering. The main series found throughout this region is the Cecil series.

No. 4. Residual Limestone. This province consists of the massive limestone areas which have been subjected to long periods of solution. The soils thus formed are included in the Hagerstan series, and are rich blue grass lands.

No. 5. Constitutes the Appalachian Mountain belt which is chiefly forested and none agricultural.

No. 6 occupies the great flood plain of the Mississippi River. The Yazoo series of alluvial soils is the most prominent and constitute the cotton and corn soils of these regions.

No. 7. Constitutes the humid



Molded like a Goodrich Tire — into one solid piece

Ask for the RED-LINE

Buy boots that won't leak, peel, crack or split apart!

**Goodrich "HIPRESS"**

THE ORIGINAL

**Brown Rubber Boots and Shoes**

"With the Red-Line 'round the Top"

Made of the same, tough, wear-resisting rubber that's used in Goodrich Tires—by the famous Goodrich "HIPRESS" process—the new method, originated, perfected, and used only by Goodrich—that welds fabric and rubber under enormous pressure into one solid piece that stays together.

Goodrich "HIPRESS" footwear fits your feet while you're working—because it's shaped to the foot.

"HIPRESS" boots and shoes outwear leather—and they never need half-soling!

Sold and recommended by over 27,000 dealers. Do not be misled by color imitations. The genuine "HIPRESS" has the "Red-Line" 'round the top.

Dealer: If not stocked, write for samples and prices. This line sells fast.

**THE B. F. GOODRICH COMPANY**

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World's Largest Rubber Factory. AKRON, OHIO

western plains in which the soils are chiefly residual and derived from a variety of sedimentary rock.

No. 8. Constitutes the high plains of the semi-arid plains. The soils are chiefly residual. This region is marked by an upland prairie suitable for grazing purposes and for the production of drouth resisting crops.

No. 9. Westward from No. 8 occurs the Sierran province. It is marked by the high Cordilleran range of the Rockies, the Sierras and the Coast and Cascade ranges. Here are numerous basins and river valleys which comprise practically all the agricultural land. These areas were formed as great fresh water lakes or seas. Since that time these lakes have dried up and the lake deposits have come to constitute soils. These series are known thus far. The Jordon series, which occupies the low land surrounding remaining lakes.

**HAD A SOFT SNAP.**


During the severe weather of last winter Mike and Dennis applied for work at ice harvesting.

"Did you ever cut any ice?" said the man in charge.

"Did we?" said Mike, "sure, ask anyone out around the stock yards and they'll tell ye we're the boys that cut some ice."

"I don't mean that way," said the man, "but I guess you'll do. Take this" (handing them a crosscut saw) "and go out to where you see the crowd on the lane."

"This is a soft snap we have,



**FRICITION**

Elocks wheels and takes profits.

**MICA**


**AXLE GREASE**

Kills friction and makes profits.

Dealers everywhere.

**THE CONTINENTAL OIL CO.**

(A Colorado Corporation)



Dinny." said Mike as they strolled along. "Three dollars a day and we don't know what we're going to do."

"I know what we're going to do all right," said Dennis, "but what I'm wondering is which one of us is going to get at the bottom end of the saw."



# Farm Management Problems

Dr. R. J. Evans.

There has been much said about the "One Acre Farmer," about his financial success, his value to the community and his duty paid to "Mother Earth." The reason for making these assertions are purely of surface origin. On the mere face of the business it appears plausible, but what are the real facts in the case?

We hear it said that a certain crop, or a particular line of livestock pays best. Is it true and if so, how true?

A noted business man made the statement a short time ago in an appeal to a body of farmers that the wise farmer is the one who specializes. The statement that, "This is an age of specialization," has almost become proverbial. Is it true? If not, why not?

These are but a few of the many hypothetical statements made by some farmers and by many non-farmers. Why such existant ideas? They have come largely by long range observations, by surface appearance, by observation of the farmers mode of living or by other uncertain measures. Some persons have the idea that if a little fertilizer is good on a farm, more is proportionately better. We have in general been in the habit of applying our fertilizers for certain crops, and never on our hay and pasture crops. Why?

## How to Measure Farm Profits.

Let us try to clear up a few of these propositions if possible. To do this it is necessary to get at the real facts in the case. We must resort to some method of measuring success in farming from the financial viewpoint. It can be nothing short of business analysis.

But says one, "I have a balance of One Thousand Dollars in the bank, whereas last year I had but Five Hundred." This is not a real test because the farmers business may be of sufficient size that 5% interest on his capital would give him a living and Five Hundred increase and the farmer make nothing for his years work. Or he may have sold some of his stock cattle that year, making the income look big whereas his capital shows a proportionate decrease. On the other hand his neighbor may have bought more livestock or land and show no bank account and still make money.

To study and work at these very problems The Office of Farm Management in the U. S. Department of Agriculture was created, for the same purpose similar departments have been established in many of the State Agricultural Colleges. These institutions have been carefully studying the problems first hand with the farmers. The results have been very valuable.

Instead of measuring the farmer's business success by his bank account it should be measured by his "Labor Income." What he actually makes for his year's labor. This is determined by getting his total farm income and subtracting from it his total farm expenses and interest on his capital invested in the farm business.

The following is a concrete example of how it is done.

	FARM Items	Totals \$12,500
Capital (average)		
Receipts: Crops	1860	
Stock	1020	
Stock products	600	
Miscellaneous	200	
Increase inventory	150	3830
Expenses. General	1640	
Stock	260	
Decrease inventory		1900
Farm income		1930
Interest on capital at 5 per cent		625
Labor income		1315

On this system we are able to determine how much the members of the family other than the farmer earn working on the farm, how much the farm and the farmer together earn and how much the farmer earns as an individual. The farmer really has available for his use the net farm income, a portion of which was made by the farm and the remainder by himself. The farmer's labor income then is the real measure of his earning ability. Of course, his earning capacity is going to be either helped on hindered by many farm factors, as size of business, quality of business, diversity of business etc., i. e. much or little land, many or few livestock; good or poor land, good or poor livestock; few or many classes of crops on livestock.

## Size of Business.

To answer our first question. On the average in this and other states the larger farms pay the farmer better for his labor than do small ones. There are some exceptions. The conclusions are drawn from nearly five hundred farm records taken in Utah and thousands in the U. S. This is not a guess, nor an observation, but a fact.

## Quality of Business.

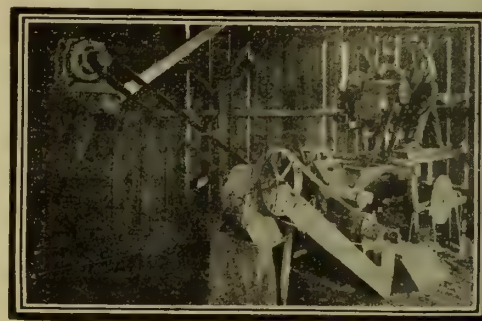
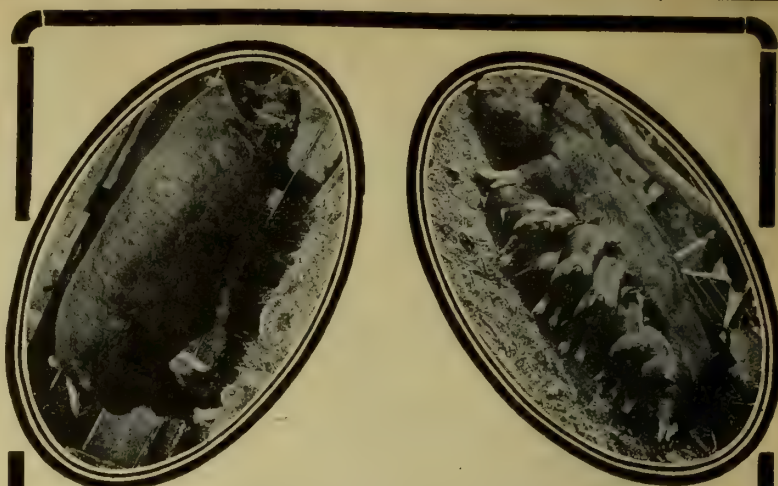
The quality of livestock or the quality of crops has more to do with the labor income than breed or variety of stock or crops. Our results show that one kind of livestock may pay better on one man's farm while another kind pays better on another man's farm. The one may know how to handle hogs or beef cattle, and be utterly unadapted to handle dairy cows. The reverse may be true of the other farmer. These however are special cases. By learning the first man's methods the second man may succeed in a measure with hogs and beef cattle.

## Diversity of Business.

This is not an age of specialization in farming except in rare cases. It is rather one of diversification for the average farmer. Breeders of livestock or of crops may possibly be exceptions. Both production and markets are too uncertain for any other method than a diversified one. This conclusion is based on facts. It is usually good management to choose one or two major enterprises in the farm and group the others about these few.

## Economic Fertilizing.

The fertilizer experiments at certain stations have been worked over from the farm management standpoint and determined that in those states the fertilizers pay best on crops which are usually not given applications of fertilizers. We are just now



# P I G S and ELECTRICITY

Since electricity has reached the farm of Utah, Southern Idaho, and Western Colorado more and more livestock growers have adopted the conclusion reached by thousands of other prominent and successful stockmen and State Experiment Station experts, who have proven conclusively the economy and advantages of prepared foods for livestock.

Electric power makes it easy for you to avail yourself of this saving.

Ready instantly night or day for work—operating at an extremely low cost—dependable, flexible, and simple in operation—the Electric Motor has become absolutely indispensable to the progressive farmer and livestock grower of today.

The photographs above are of pigs fed with ground feed—ground by electric power. Ask our nearest office for the booklet "Pigs and Men."

# UTAH POWER & LIGHT CO.

"Efficient Public Service"

beginning to merge from similar practices in this State.

Farmers often hesitate to manure land for certain crops for fear of lodging the plants. If any doubt exists apply the manure to the hay crop or to pasture. If the hay begins to lodge cut it and let the next crop grow. Too much hay is hard to get. By plowing up the hay when five or

six years old the crops that follow with few exceptions will get all they want for a few years.

## Labor Problems.

The average farmer with his equipment can handle a certain acreage of sugar beets economically. When this amount is all he can economically handle he can still take on a few (Continued on page fourteen)

**GREATEST RAZOR  
Offer Ever Made!**

Send name and address (no money) and get this high-grade automatic razor, round or square point, on 20 days free trial. If satisfied it is the best razor you ever used and wish to keep it send \$1.00 or not return it. This razor is made by a secret process that insures a velvet shave. D. A. BATEMAN, 230 E. MARKET ST., LOUISVILLE, KY.





# Preventing Winter Damage To Harness

—By The Oil Philosopher.

You would not pour sand in the bearings of your mower to increase its efficiency. But sometimes you unconsciously permit rain and dampness to destroy your harnesses. Before your harnesses are used again, go to your dealer and get a can of—

# Duck-Back Harness Oil

and water-proof them. Harnesses treated with Duck-Back Harness Oil are not affected by dampness, because water cannot get into the leather that has been properly treated with this natural harness oil. Keep your harnesses strong and pliable and maintain their wearing qualities; cut down the repair bills—by using Duck-Back Harness Oil. Your dealer will supply you. If he is out of stock, just notify the Utah Oil Refining Company, Salt Lake City and it will see that you are promptly supplied.

Utah Oil Refining Co.  
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## Big Money in Running Water

Let us start you in a business that will make you from \$15 to \$50 a day when farm work is slack. Other men have done it for years with an

**Improved Powers Combined Well Boring and Drilling Machine**

Same rig bores through any soil at rate of 100 ft. in 10 hours, and drills through rock. One team hauls and operates machine. Engine power if wanted. Easy to operate—no experts needed.

Small investment; easy terms. Make machine pay for itself in a few weeks work.

There is a big demand for wells to water stock and for irrigation. Write for free illustrated circulars showing different styles

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One Man  
One Team

# How the Agricultural College Is Helping

Dr. E. G. Peterson, Director of Extension Division.

Farm Management Demonstrations have been incorporated as a part of the Extension work of the Utah Agricultural College, largely as the result of government patronage, because of the prime necessity of placing our growing agriculture upon a business basis. It is recognized, of course, that farming is more than a business, it provides a home life as well. It can never therefore be placed upon the same status precisely as the grocery store, the bank or such other purely business establishment. The grocery man must secure enough profit to enable him to build, equip and supply a home separate from his business. The farmer if he has no profit by way of cash dividend at the end of the year has at least maintained a family and probably aided in the education of sons and daughters.

Yet farmers are being brought to realize the necessity of recognizing the business factors which go to make up their enterprise. And to be sure no one needs to give keener analysis to his business than the farmer. He has a complexity in production and marketing which exceeds the complexity in banking, or wholesale or retail merchandising. And as a result of this complexity, which appears to be constantly increasing, brains, preparedness, business ability and character are being brought more and more into requisition in farm work.

It is a source of great and permanent profit to Utah that the early leaders encouraged the best blood to stay on the farm. In many cases some of the strongest mental and moral strains of the early pioneer life were called to build up remote places in Utah and elsewhere. Such is true of San Juan, Washington and Kane Counties, only to mention a few. Today in these places and others the benefit to the State is marked. Sterling citizenship has developed in these places often surpassing, in its altruism and its devotion, the citizenship nursed by our larger centres. The outposts of Utah are defended by strong men and women. And so with farm life in general; Utah's best blood has been traditionated to the soul. We cannot, even now after many years have passed, estimate the value to society of this far-seeing statemanship of Brigham Young and his counsellors.

So we welcomed the opportunity given us by the government to incorporate a series of demonstrations in business efficiency, of farm management, as a probably permanent part of our Extension work, realizing that we had all the qualities of citizenship and agricultural wealth necessary to make this, not only illuminating and highly instructive to the people of Utah but also make it a credit to the State outside the borders of Utah.

The general idea is to analyze a farmer's business, the College and government agent in this work leading in the analysis, aided by the county demonstrators. After an analysis has been completed of from 50 to 70 farms in a typical area the farms are compared, not by names but by numbers, and the poorer farmers are shown in what precise ways

they differ in their business methods and farm organization from the better farmers. A man who makes only \$500 understands after the demonstration why he makes only \$500 when another farmer with the same money invested in the farm business makes \$2500. It is designed that the \$500 farmer will be aided to reorganize his farm so that it will more nearly correspond to the \$2500 farmer. The county demonstrators in the various counties do much of the work, being leaders in their counties.

It is a method whereby the good farmer becomes a business object lesson to the poor farmer, the good practices of one being carried to the other. The work is succeeding very satisfactorily in Utah. Credit is due in large measure to the farmers themselves who early saw the opportunity presented and have cordially supported the movement from the first. The reports of E. B. Brossard, in charge of the work, to date indicate that we have, in general, agricultural possibilities which are unexcelled. Many of our farmers are truly wonderful farmers having a knowledge of soil requirements and of business management which make them powerful factors for the development of their communities.

## FARM ACCOUNT BOOKS.

E. B. Brossard.

A simple Farmers Account Book has been gotten out by the U. A. C. under the direction of the Farm Management specialist, Mr. E. B. Brossard. These account books are very simple and especially adapted for use on the average Utah farm. They may be had on application, for the nominal fee of 25c each. All farmers who in 1914, co-operated in the Farm Management Demonstration Work have bought one of these Farm Account Books and are now keeping records of their farm business for 1915 in the same. Space is provided for the inventory of all machinery, feed and supplies, live-stock, real estate, etc. Pages are also provided for the entrance of all Farm Receipts and all Farm Expenses. There are notes on the front page of the book which explain the entrance of all items in the book. This makes it so simple that a 12 year old school child could keep all the farm accounts.

It is gratifying to know that the farmers are interested in knowing just the conditions of their farm business and that they are anxious to keep a record of the same. It is hoped that the farmers who have co-operated in the Farm Management Demonstration will have their entire Farm Business for the year ending January 1st, 1916 entered in this book. If this is done the Farm Management Record can be taken from the books this winter and be an absolutely accurate record of the individual farm business.

Judge—What brought you here?  
Prisoner—Two policemen.  
Judge—Drunk, I suppose.  
Prisoner—Yes, both of them.

# LIVESTOCK INSURANCE THE STOCK OWNERS PROTECTION.

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Established 1904

Entered as second-class matter in the postoffice at  
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#### OFFICES

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Lehi, Utah, Kirkham Building.  
Our office at Salt Lake City, Utah,  
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New York Office 5th Ave. Bldg.  
S. E. LEITH, Mgr

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H. T. EVANS, Mgr.

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**Change in Address**—When ordering a change in the address, subscribers should be sure to give their former as well as their present address, otherwise the address cannot be changed. This is a matter of importance to you and to us.

**Advertising Rates**—The advertising rates will be sent upon application.

#### OFFICIAL ORGAN

Utah Horticultural Society, Utah State Dairymen's Association, Utah State Bee Keepers' Association, Bear River Valley Farmers' Protective and Commercial Association, Agricultural College Extension Department and Utah State Fair Association, Utah-Idaho Millers' and Grain Dealers' Association, Utah Fruit Growers Association.

#### OUR GUARANTEE

We guarantee every subscriber against loss thru dishonesty or attempted swindle by any advertiser in this publication. We do not attempt, however, to adjust trifling differences between the subscribers and honest, responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within thirty days from date of the transaction, and the subscriber must have mentioned Utah Farmer when writing the advertiser.

#### ANNOUNCEMENT.

Our readers will notice a number of changes in the Utah Farmer this issue. For some time we have been planning to make these improvements. We are using a great deal better paper which will help the appearance and quality of the Farmer. Our plans are to have a similar make up each week, to have the Dairy department always on the same page. The wife or daughter can turn to a certain page and always find the Home department. The one interested in poultry will know where to expect those subjects that interest him, and so we plan to make it with each department.

We have had many compliments and encouraging words, lately about the good things that have been published in the Farmer. We are going to give our readers a paper that will be a help and inspiration to them. Experts and practical men who are making a study of local conditions will write for the Utah Farmer, giving the result of their study and experience. In other words we are going to give you so much good reading that you can not afford to be without it. We also want our readers to write for us, tell your experiences how you have succeeded, it will be helpful to others.

#### SHOW COWS IN SHOW CONDITION.

Visits to a few county fairs and the State fair would lead one to believe that a great many breeders of dairy cattle do not appreciate the value of having the cows they show fresh in milk. A walk along the lines of dairy cattle show a great many dry cows. Of course, it is too late

to remedy this condition for the shows past, but it is about time to begin thinking of it for the fairs next fall. Breed the cows right so that they will be fresh, for no matter how expert a judge is, and how fair he tries to be, he is bound to favor a large, full, fine udder—this is the business end of the dairy cow. To have such a thing tangibly before him is easier than to guess what a dry cow's udder will be. Of course, this is not always possible because cows sometimes miss in breeding, but it is an end well worth working to.

#### BOYS' AND GIRLS' AGRICULTURAL CLUBS.

There has been a large increase in the membership of the various boys' and girls' agricultural Clubs, in the district known as the Northern and Western States. In this work Utah is a leader, for each year we have gained national reputation in the work accomplished. The boys' and girls' who take part in these clubs are more interested in the farm and home. They are interesting their parents in the work, for often at a demonstration many of them are in attendance. One of the great advantages of this club work, is the fact that it serves to stimulate the parents as well as the children.

The growth of this work in our State has been wonderful, when you consider that it was started out a few years ago and today hundreds of boys and girls are active members. Much good is being accomplished. The boys and girls of today are the farmers and house keepers of tomorrow. The lessons taught them in club work will help to make them better farmers and home builders. The movement should have the support of every parent, it will help them to help their children.

#### FARM MANAGEMENT INVESTIGATIONS.

We are publishing in this issue of the Farmer a report of the investigations conducted by the division of "Farm Management" under the direction of the Utah Agricultural College and U. S. Department of Agriculture. This report may be considered by a very busy farmer to be rather lengthy and it may be a little difficult for some to understand thoroughly at first reading. But we wish to recommend this highly to every reader of the Farmer and to urge every man to take the time to study it. The material in this report applies directly to Utah conditions. It is just what our farmers need. It shows who is making the money and why. A careful comparison of ones own system of management with those used on the most successful farms may enable a man to make many a profitable readjustment of his operations.

#### WE WANT YOUR HELP.

We are starting this week a subscription campaign and hope to put on five thousand new subscribers this winter. We know that it can be done if our readers will only give a little help. When you send in your renewal, send along the subscription of your neighbor or friend. Send us the names of a number of farmers so we can write them and tell them about the Utah Farmer. This will greatly help us and indirectly help you. An increase in the number of subscribers means an increase in advertising and this will give us more money to increase size of paper. If each subscriber will comply with this request you can see what a great help it will be to us. We hope every one will do their part toward increasing the number of readers to the Utah Farmer.

#### BREED THE SOWS EARLY.

Early spring litters are better than late spring litters because the pigs can be put on the market early in the fall when the demand for pork is usually strongest and when the price is usually best.

It is usually true that early fall litters are better than late fall litters because the early pigs get a good start before cold winter weather sets in and the mothers get the benefit of the abundant fall pasturage whereas the late pigs are likely to become stunted and the mothers have to be kept shut up and fed without pasturage while they are suckling the pigs.

In the lower valleys of our state mature brood sows should always produce two litters a year to be most profitable, and a good time to have these litters come in March first and September first.

In order to do this the sows should be bred during the first half of November. Farmers will do well to pay a little time and attention to this matter. If you have not a good pure bred boar, you should get one right away or secure access to one.

If you are buying a boar you should have him at least two weeks before using him so that he will become accustomed to the place and feel at home. He should be on the gain when turned with the sows, not on the decline. If he has come from any distance he should be guaranteed for two weeks to make sure that he is not carrying any contagious disease.

#### HOW THE HIGH SCHOOLS CAN HELP.

We have a great many high schools in the State for which the people are paying out a good deal of money, but in many cases they are not making the best use of them. These schools belong to the people and are for the service of the people. They should not only instruct the students who come to them but should reach out and lend their aid in solving the practical problems of the community.

We urge that farmers solicit the co-operation of the high schools. Many school men would willingly lend a helping hand if asked to do so but they hesitate to take the initiative.

Just now most farmers are extremely busy with beet harvesting and fall plowing, but a little later on they will have considerable time which might be devoted to the study of Agricultural problems and to the planning of next years operations.

It is right here that the high schools could render a valuable service in helping the farmers to systematize such studies. A weekly meeting might be held during the winter months at which lectures could be given and discussions held. These lectures might be given by men from the Agricultural College or the State University, by county demonstrators, successful local farmers, and high school teachers. The U. S. Western Dairy Division in Salt Lake City will gladly furnish speakers free of charge to talk on any phase of dairying.

If farmers want such a course as this it is time for them to be thinking about it and making plans for it.

A man who devotes himself to the development of his own character will succeed in nothing except making a prig; but if he devotes himself to helping other people, his character will take care of itself.—Woodrow Wilson.



## ORCHARD AND GARDEN

### APPLE MARKETING.

Commerical supply much less than last year. Market conditions show market improvement.

The marketing of the 1915 apple crop opens with more encouragement to growers and dealers than they found in the prospects for the 1914 crop. According to investigations conducted by the Bureau of Crop Estimates, last reports show the condition of the crop to be approximately 80 per cent of the yield last year. The merchantable supply or commercial crop, as distinguished from total production, therefore, would appear to be approximately 40,000,000 barrels at the highest, whereas the commercial crop of 1914 is variously estimated as having been from 50,000,000 to 60,000,000 barrels.

It is reported that, in the large areas where barreled apples are produced, the crop of early fall varieties is relatively larger than the crop of winter varieties. This would seem to indicate that within a very short time a considerable quantity of apples included in the bureau's estimates will be eliminated from consideration. Furthermore, it is said

that the crop in some sections is seriously affected with fungus and blotch. To the extent that these defects prevail will the merchantable supply be reduced. Under these conditions, therefore, it would appear that the commercial crop of winter varieties may be considerably smaller than the total production the report would seem to show.

The business conditions show a marked improvement over last season, according to trade reports received by the Office of Markets and Rural Organization. The South, particularly, is in easier condition, and it is said that the United Kingdom and countries in the north of Europe will take liberal quantities. However, with reference to Europe, it is to be remembered that steamer space is in great demand. It is reported that all cold chambers are under contract with meat packers until the first of the year, and ordinary space is said to be more limited than in 1914. In shipping circles it is maintained that Europe may not be expected to take the same quantities as last year.

According to trade reports the abundance and cheapness of apples

during the past year will be reflected in a satisfactory consumption this year. In other words, it is thought that the habit of eating apples may be expected to hold over from last season. However, one or two correspondents maintain that the conditions of one season do not affect the next in so far as consumption is concerned.

It is generally reprinted that abundant storage space will be available and that comparatively there will be no great difficulty in financing the movement of the crop. Conditions for liberal consumption are said to be good in most markets, and altogether there is a decided feeling of optimism on the part of those concerned as compared with absolute gloom this time last year.

It is to be remembered, however, that 40,000,000 barrels of merchantable apples, which is thought to be the maximum estimate for this year, are a goodly supply, and that to assure a steady, normal movement throughout to the conclusion of the season next spring, large quantities must pass into consumption between now and the first of the year. Unreasonably high prices at this time will mean a curtailment of consumption and the storing by the growers of larger quantities than the conditions might justify, with the result that later on they might receive net

prices below the level of opening values.

By this it is not meant that growers ought to sell now for less than market value nor is it meant that buyers are to be encouraged in depressing opening values. The outlook is normally encouraging for satisfactory profits to all concerned if good judgment is used, and it is meant to urge upon growers and dealers alike the advisability of breaking deadlocks with reasonable concessions on the part of all. Arbitrary ideas of values should be avoided, so that the movement of the crop may proceed in a healthy way.

Unfortunately, when the demand for apples is good, many growers and packers seem to feel that poor grading is justified, and in such years there is a tendency to lower standards. Attention is called to the fact that no condition can justify anything but an honest pack. For a poor grade and shoddy pack the producer ultimately must pay, although temporarily the packer may receive an advantage. Apples should be sold for just what they are, according to the recognized grades. Whether or not the price may be high, growers and dealers alike should adhere strictly to that policy.

Under all conditions there are certain fundamental processes that ought to be observed in preparing the

(Continued on page thirteen)

## The Inter-Mountain Rural Credit Association

(INCORPORATED)

Why not secure some credit with us for a loan at 6 per cent per annum for a period of 5 to 35 years.

This is a Co-operative Association, will be owned by you, and you will pocket its earnings. Therefore, you must necessarily become a shareholder in order to enjoy the advantages it has to offer.

Each share of stock will entitle you to a loan of \$1500.00. Your share of stock will net you annual dividends. The stock will cost you \$100 per share, \$50 down, \$25 in 5 months and \$25 in 8 months without interest.

The sooner you join the association the sooner you will get your loan.

Call or mail a postal card today to the

**The Inter-Mountain Rural Credit Association**  
McINTYRE BUILDING.

SALT LAKE CITY, UTAH.

The Inter-Mountain Rural Credits ass Utah State Fair. Right to left—Louis Hammond president of the association;

ocation booth and representatives at the L. Allen, T. T. Moyes, James T. R. Albert Moyes and V. H. Gregg.

This association has been organized for the purpose of furnishing money to Utah and Idaho farmers at 6 per cent for periods of from five to thirty-five years. Although the association has been organized less than a month, the farmers are receiving it with enthusiasm. The importance of rural credits organizations is becoming recognized throughout the country, as was evidenced in the resolution indorsing the organization of

associations, passed about two weeks ago by the International Irrigation congress, while in session at Los Angeles. In connection with the popularity of the movement it is noteworthy that "Rural Credits" day was celebrated at the Panama-Pacific exposition September 22 and Myron T. Herrick, formerly ambassador to France, delivered an address on the subject. The Inter-Mountain Rural Credits association has its head offices in the McIntyre building, Salt Lake.



## THE HOME

### HOME ECONOMICS ASSOCIATIONS PROGRAM FOR DECEMBER.

Papers—The Christmas Spirit-Gift Giving; The Children's Christmas.

Demonstrations—Christmas Candles; Cakes, plain and fancy; Dressings for poultry.

Miscellaneous—A Christmas Social—A Sale of Home Made Gifts.

#### Notes from Associations.

Moab reports as follows: "The Moab Home Economics Association held its first regular meeting last week and it was very successful. Favorite recipes were given for pickles. Musical numbers were given and a lively discussion was carried on, which resulted in appointing a committee of five to confer with the Juvenile officer and see what can be done toward correcting the tobacco and profanity habits among the boys. There are now 40 members and many others who will join. We are very pleased with the beginning and feel that it is sure to be successful. Many are interested in the correspondence and asked for cards and bulletins. Will you kindly send us about a dozen cards and bulletins to be given members who desire the courses. We ran out and women are asking me every day what courses are given and what they consist of."

Deseret, Hinkley and Delta are doing a good work in Millard and the women are proving themselves appreciative of the work being done by Miss White, the home demonstrator for the county. Miss White is devoting much of her attention to assisting the women in systematizing their home work, but is always ready to answer calls for help along other lines. She helped to make the women's department of the County Fair a success, and Mrs. John T. Caine III, who was the judge for this department, said that the Domestic Art display was among the best she had seen.

Brigham City held its regular meeting October 1st. Plans for the coming season were discussed. Among them were a course of lectures on home nursing offered for the benefit of the members and all who cared to join, by one of the local doctors. Also a co-operative scheme between the Steam Laundry and the Association, whereby a "wet wash" is to be installed providing a patronage of fifty is assured. Suggestion was made that an ironing mangle be added to the equipment so as to relieve the women in the home. The members report some interesting meetings, and good attendance.

Duchesne finds the Association meetings a help and expects to continue them throughout the year.

Blanding Association holds meetings every month and reports them as helpful to the community.

One of the best pieces of work done by any Association this year may be put to the credit of Roosevelt. This body of women safeguarded the town against a return of the typhoid epidemic that menaced it last year. Working in connection with the Town Council, a constable was appointed to see that corrals were not only cleaned but kept clean, outhouses rebuilt

or repaired, houses well screened, fly catchers and spatters used. The women made the initial visits and the rest easily followed, with the result that the town was rendered nearly fly proof and there was not a single case of typhoid. A good showing for an Association less than a year old.

#### TESTED RECIPES.

During the State Fair the Home Economics department of the Agricultural College served some meals in the A. C. Building. A number of women asked for recipes used at that time. We give them below for the benefit of all our readers.

##### India Relish.

Put  $1\frac{1}{2}$  cups salt on 1 peck chopped green tomatoes and let stand over night. In the morning drain and add 1 medium cabbage, chopped fine, and boil all in three quarts vinegar  $\frac{1}{2}$  hour. Then add 6 onions, 3 red peppers, 2 green peppers (chopped fine) 6 cups sugar, 2 tablespoons celery seeds, 2 of mustard seed, and 1 of stick cinnamon and whole cloves (in a bag). Cook all until onions are perfectly soft.

##### Grape Juice.

25 pounds Concord grapes, enough water to cover. Cook until they burst open. Mash them well. Let the juice drip over night through a jelly bag. In the morning add 4 pounds sugar, let boil, skim carefully, seal boiling hot, keep in a dark place.

##### Cottage Cheese Salad.

1 pound cottage cheese,  $\frac{1}{2}$  cup sweet red peppers cut fine, green peppers, celery, cucumbers, walnuts, a little onion may be used. Homemade salad dressing or mayonaisse.

##### Watermelon Pickles.

Peel and dice 10 pounds watermelon rind, boil 20 minutes. Drain water off and make syrup of 3 lbs. brown sugar. 1 qt. good vinegar.  $\frac{1}{2}$  oz. cloves. 1 oz. cinnamon.

Pour syrup over the rinds boiling hot 3 days in succession.

##### Olive Oil Pickles.

Wash, scald and slice 100 small cucumbers. Peel and slice 3 pints of small silver skinned onions. Seed and slice 4 green bell peppers, sprinkle with salt in layers let stand 24 hours. Drain and cover with cider vinegar and let stand 6 hours. Mix 4 tbsp. mustard with 4 tbsp. mustard seed, 1 tbsp. celery seed, 1 tsp. pepper and  $\frac{3}{4}$  tsp. powdered alum. Mix this thoroughly with drained cucumbers and onions, add 2 cups of olive oil and 4 cups of cider vinegar. These pickles will keep in glass jars without sealing. Will be ready to use in 48 hours.

##### Grape Marmalade.

After the grapes have been picked over, washed and drained separate the pulp from the skins and place in a preserving kettle. Boil gently until the seeds free themselves. Then put through a coarse sieve to get the seeds out. Add the skins to the pulp, measure, allowing equal bulk of sugar, boil 30 minutes, stirring often, pour in glasses and seal.

##### Plum Conde.

5 lbs. plums.  
5 lbs. sugar.  
1 lb. seeded raisins.

## The Sum Total of Comfort

A PERFECTION HEATER and a supply of kerosene mean solid all-day-long comfort. The Perfection is ready in a minute. Take it anywhere. Smokeless, odorless—always ready. Economical, too—gives you ten hours of glowing warmth on a gallon of kerosene—the handiest, most economical of fuels.



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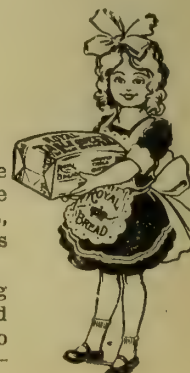
"Who wouldn't stop baking, when bread, with the goodness of Royal Table Queen, may be purchased, fresh every day from the grocer," said a housewife the other day.

Thousands of housewives have seen the folly of home baking. Besides it is cheaper to buy—

### ROYAL TABLE QUEEN "The Perfect Bread"

than to bake your own bread at home. Royal Table Queen is a more nutritious loaf, because it is made from a blend of four selected, high grade flours, better flours than any housewife buys; and it is scientifically baked in a clean, sanitary bakery.

Premiums for Xmas Presents—The Royal Baking Company buys useful household articles in carload lots, at very low prices. These articles are sold to users of Royal Breads at the same price they pay—save the labels and wrappers.



An Honest Bread at An Honest Price 100% Pure

Royal Baking Co., Salt Lake City, Utah



## Pattern Department

Full directions for making as the quantity of material required, accompany each Pattern. Price of each Pattern, 10c; no extra charge for postage. When ordering, all you have to do is to let us know your name and address, the number and size of each Pattern you want, enclose 10c for each pattern, and address all your orders to: PATTERN DEPARTMENT, THE UTAH FARMER LEHI, UTAH.



7408—Ladies' Waist. Cut in sizes 34 to 42 inches bust measure. Long or short sleeves may be used.

7438—Girls' Dress. Cut in sizes 6 to 12 years. The dress has a five gored plaited skirt.

7118—Ladies' Skirt. Cut in sizes 22 to 32 inches waist measure. The skirt closes at the left side of the front.

7399—Children's Apron. Cut in sizes 4, 6, 8, 10 and 12 years. The apron slips on over the head.

7429—Ladies' Dress. Cut in sizes 34 to 44 inches bust measure. Long or short sleeves may be used and the skirt has three gores.

Price of any of the above patterns 10 cents each.

### PATTERN ORDER COUPON

Send the following Patterns:

Pattern No. .... Size or Age. ....

Pattern No. .... Size or Age. ....

Pattern No. .... Size or Age. ....

Name. ....

Town. ....

I enclose c) To pay for same) R.F.D. .... State. ....

It happens too often, that the man too hard up to buy a good farm paper that keeps him posted is usually the one who has money to spend on fakes.

4 oranges.

Remove stones from plums, add sugar and stir until sugar is dissolved. Add raisins and cook 30 minutes. Add grated rind and juice of oranges, boil for 30 minutes, or until mixture thickens.

#### Pepper Relish.

12 green bell peppers.  
12 red bell peppers.  
3 onions.  
3 tb. salt.  
2 c. brown sugar.  
1 qt. cider vinegar.

Wipe peppers, cut in halves and remove seeds. Pare onions and add to peppers and force through a meat chopper. Put in kettle, cover with boiling water and let stand 10 minutes. Drain as dry as possible, return to kettle, add remaining ingredients, bring to boiling point and let simmer 15 minutes.

#### Canned Tomatoes.

##### Tomato Stew.

1 qt. can tomatoes, 1 tbsp. butter, 1 tsp. sugar, pepper, salt; cook till hot. 3 eggs, well beaten. Remove tomatoes from stove, add eggs gradually and let simmer few minutes, serve over cubes of toast slightly buttered.

##### 'Scalloped Tomatoes.

Alternate layers of dried bread crumbs and tomatoes, seasoning to taste. Add stock or tomato juice to moisten. Cover with buttered crumbs. Bake in a moderate oven one hour.

##### Italian Spaghetti.

1 pkg. spaghetti, cook in boiling salted water 1 hour.  
1 pint can tomatoes, stew slowly with butter, 1 small onion and seasoning, 1 hour.

½ lb. grated cheese, place alternate layers of spaghetti and tomato in a baking dish, sprinkling each layer with cheese, cover with buttered crumbs and bake in a slow oven one hour.

##### Potatoes O'Brien.

Dice freshly boiled or steamed potatoes. With each quart mix, 1 tbsp. chopped green pepper, 1 tsp. cooked bacon or ham, 1 tsp. grated onion, 1 tsp. tomato. Bake in hot oven 15 minutes.

##### French Stew.

1 qt. potatoes, peeled, sliced. 1 tbsp. rice or barley. 1 onion, sliced. 1 pt. tomatoes. Cook together slowly till tender. 1 c. milk. 1 egg. Remove stew from heat, add, and allow to simmer five minutes.

##### Stuffed Onions.

Parboil large onions till sufficiently tender to remove inner portions, leaving shells. Mix together equal portions of onion pulp, stale bread crumbs, cold meat ground finely, season and moisten with stock, cream or butter. Fill onion shells with same. Cover tops with buttered crumbs, bake in well greased pan in a moderate oven for one hour. Baste with fat to keep from drying.

### HIS IDEA OF HOW TO MAKE A VENETIAN BLIND.

"You thoroughly understand carpentry?"

"Yes, sir."

"You can make doors, windows and blinds?"

"Oh, yes, sir."

"How would you make a Venetian blind?"

"Punch him in the eye!"

#### A REAL OPTIMIST.

Mrs. Hogan was busy washing when Hogan came in, dropped into a chair and said: "Well, Norah, Oi've lost me job at the oil well, but Oi'm glad Oi ain't Terry Dolan."

"Why air yez thankful fer that?" asked Mrs. Hogan.

"'Tis aisy seen," answered Hogan. "If Oi was Terry now an' widout a job, shure Oi'd be losin' five dollars a day instid av only three and a half. Think av that, darlin'."

## The Drink that gives WOMEN Strength



Ghirardelli's Ground Chocolate is a sustaining beverage. Women whose strength is taxed for any unusual cause will find a daily cup of Ghirardelli's just the thing to meet the drain on their bodily vigor.

Ghirardelli's Ground Chocolate in hermetically sealed cans is a blend of finest cocoa and pure sugar—delicious, strength-bestowing—an economical palate-stirring food-beverage.

Ghirardelli's is used in more homes in the West than all other brands of chocolate combined. For your protection be sure you get

## Ghirardelli's The Only Ground Chocolate

In ½-lb., 1-lb. and 3-lb. hermetically sealed cans. There's a double economy in buying the 3-lb. can.

D. GHIRARDELLI CO.

Since 1852

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You are invited to visit the Ghirardelli Pavilion at the Panama-Pacific International Exposition and see a model chocolate factory in operation



"Ball-Band" Arctics for men, women and children. Red Ball on the sole.



### All Over America Men Look for the Red Ball

Watch the wise farmers you know when they buy their rubber footwear. They ask for "Ball-Band" and look for the Red Ball Trade Mark.

Over eight and one-half million men wear "Ball-Band" Rubber Footwear. Over 50,000 stores sell it. And the reason is that figuring the cost of rubber footwear on the cost per days wear proves "Ball-Band" the cheapest.

## "BALL (Red) BAND"

"Ball-Band" is strong at every point where extra strain comes. "Ball-Band" boots are vacuum cured. During the vulcanizing this process causes a tremendous pressure on the fabric and rubber and makes the boot one solid piece.

### Free Booklet "More Days Wear"

This book tells how to treat your footwear so as to get the most out of it. Write for it. If your footwear merchant doesn't sell "Ball-Band" tell us his name and we will see that you are supplied.

MISHAWAKA WOOLEN MFG. CO.  
370 Water Street, Mishawaka, Ind.

"The House That Pays Millions for Quality"

When you answer the advertisements in this paper tell them you saw it in the Utah Farmer. Always buy advertised goods. The manufacturer's name on the articles is a guarantee to you.



## DAIRYING

### USE OF CHEMICALS

#### BY DAIRYMEN.

By Ben R. Eldredge.

In the production of milk there is nothing that will take the place of honest work and conscientious attention to detail. There have been among the dairymen in some parts of this state clever sales agents who have been urging the adoption by the dairymen of the use of chemicals having germicidal properties, in the rinsing water through which the bottles and utensils are passed after having been brushed and washed in the cleaning tank. Bottles, after they have been passed through this rinsing solution, are drained and put away for use, this chemical sterilization, taking the place of the steam sterilizing.

Now suppose for some reason a bottle is placed in such a position that it isn't drained, it retains small quantity of the rinsing water which is charged with a chemical germicide. What effect will that have upon the milk that is placed in the bottle? If the milk is taken by a person who is robust and in good health perhaps there will be no bad results, but, milk of that kind taken by a person who has weak digestion or taken by a sick child may have a very bad effect; for the result will be a retarding of the digestion of the milk. In other words, milk so treated is rendered difficult of digestion and when used by a person in a low state of health indigestion may follow with attendant serious results. A good washing compound such as sal soda or some similar alkali should always be used in the water in which milk utensils are washed; then a good, thorough rinse in clean water should follow which will take out every particle of the washing compound. After this rinse thorough steam sterilization or scalding with boiling water should follow but the practice of using a chemical in the rinse water to take the place of the scalding or steam sterilization is not good dairy practice. In my own home I would prefer to take a chance with milk having a little higher bacteria content than to take the chance of milk with a low bacteria content when the low count has been procured by chemical sterilization with the attendant danger of chemical contamination of the milk. In other words, I am less afraid of bacterial contamination than of chemical preservatives that may be used in the milk for my family.

I have been in the milk business. I understand something of the detail of the work, I know how important it is to sterilize pails, cans, bottles and all utensils that come in contact with milk but I want to warn my fellow dairymen against the use of chemicals to take the place of hot water and steam. I have got nothing to sell to the dairymen of Utah. I want them to take my advice in this case as one who has had experience in milk production but who will not profit one way or the other, in a pecuniary way at least, whether the advice is taken or not. Men who come to you with chemical compounds to be used in dairying make a profit on their sales. Some of these profits are high, and one firm in a large eastern city had

become enormously wealthy through the manufacture of food preservatives and chemical substitutes for properties in various kinds of foods. Some of their wares have been driven from this state. Some of them may possibly yet be used in minimum quantities but dairymen should not lend a willing ear to any agent who has this class of goods to sell. There is no mystery about the production of clean milk, there is no secret about the producing of milk with a low

bacteria count. Good common sense cleanliness has achieved wonders in the past and in the future will bring victory wherever it is consistently followed up. Even chemical fumigation is in the balance now against old-fashioned soap and water as a means of driving disease germs from our homes and schoolhouses where disease has been rampant.

Dairymen, if you want to be up to date, if you want to put out an honest product, remember SAFETY FIRST. Cleanliness is safety. Stick to hot water and steam.

Uphill work is about the only kind that gets you to a desirable position.

### AGRICULTURE—OUR

#### BEST BULWARK.

Agriculture is not alone our financial stay, but a stalwart farming population is our best political and government bulwark—an anchor to windward.

The throbbing heart of American prosperity and national life lies in the growing crops, in the keeping of our farmers.

Whatever the problems, local or international, that we must solve in the near and unknown future, we will be the better prepared for them if we build up our agriculture and rural life, making the farm more likeable as well as more profitable.—B. F. Harris.

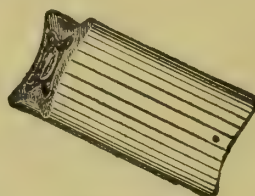
## THE MAKING OF GOOD BUTTER



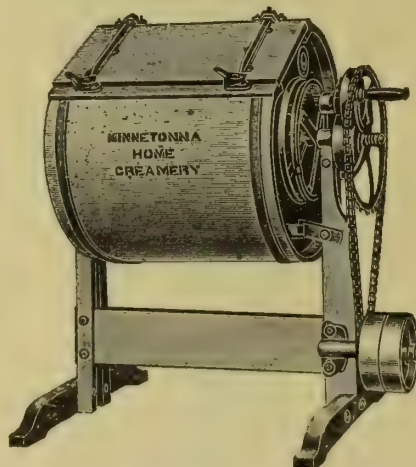
Cross section view of barrel showing how butter is worked between two rolls.



Removable shelf and idle roll in one piece.



Main Roll.



**MINNETONNA**  
TRADE MARK, REG. U.S. PAT. OFF.  
**HOME**  
**CREAMERY**

These simple parts constitute the Minnetonna Creamery.

They are easily washed and kept sanitary and sweet.

Many, many farmers are reaping the benefits afforded by these churns.

They each testify of their economy and high quality of butter.

Write us now and get a special price and proposition showing how you can secure a Minnetonna Home Creamery Plant.

**Strevell-Paterson**  
**Hardware Co.**  
Salt Lake City

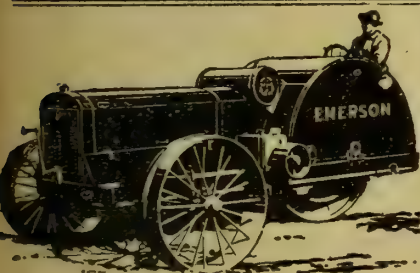


## Not "Just Sugar"

When you order sugar, are you satisfied because it merely tastes sweet? No, assuredly not! It must show pure white sparkling crystals.

Usually you pay extra for quality but when buying Utah-Idaho Sugar, you do not. Even if Utah-Idaho sugar cost you more, it would pay you to buy it in preference to any other sugar. But, it does not cost more. In fact, it costs you less than imported sugars.

When ordering sugar emphasize the compound word "Utah-Idaho." It means better sugar value.



## EMERSON Farm Tractor

Model L—12-20 Horse Power

A four-cylinder, 2-speed light weight tractor of great power, suitable for any size farm. Will pull the implements you now have on your farm—gang plows, harrows, mowers, binders, manure spreaders, road drags or graders. Will also operate your ensilage cutter, feed grinder, circular saw, etc. Does more work than horses—costs less and is so simple anyone can run it.

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Illustrated in Colors

WE CARRY LARGER SIZES

**Miller-Cahoon Co.**

Murray, Utah Idaho Falls, Idaho



SEPARATORS, ENGINES, SPREADERS

200,000 customers testify that my designers and factories build quality into them. Built for long, hard, continuous users' satisfaction. **HIGHEST QUALITY—LOWEST PRICES.** About 1-3 to 1-2 less than you usually pay. Don't buy till you get my catalog of these and other farm and household goods free. A postal order, too. Freight rates. Write GALLAGHER CO., Box B, KATHLAMET, WASH.

**FOR SALE  
DUROCI DUROCI!**  
Four 11 month old Boars. Fine specimens. Large bones. Good hams. Satisfaction guaranteed or money refunded. Price \$25.00 each. Four 4 month old. Same characteristics. Same guarantee \$12.50 each. Order quick. All show ring winners.

GEORGE ROMNEY, JR.  
Smithfield Utah

### APPLE MARKETING. (Continued from page nine)

crop for market if success is to be assured.

The fruit should be picked and packed in such condition as to insure it against abnormal deterioration. With perishable varieties having a long ripening season it is suggested that growers should not attempt to harvest the crop at one picking, but rather should glean the trees for only such fruit as is ready to come off, repeating the process until the crop has been picked in uniform, condition. The advantage is that the shipping period may begin earlier and last longer, thereby securing greater time for effecting distribution. Furthermore, if all the fruit is harvested at the same time, it is to be remembered that shipments represent extreme stages of maturity, ranging from ripe to green in the same package, and that frequently toward the end of the season overripe condition of a portion of the crop may result from failure to pick first only what is in condition for marketing.

Careful handling from trees to car is necessary to prevent deterioration. It is not difficult to understand why a lot of fruit does not arrive in the market in prime condition if it is picked and piled on the ground in the hot sun, placed in packages in a heated condition, and finally hauled in wagons without covers and springs over rough roads. With proper facilities apples picked on hot days should not be packed until the following day. For this purpose shelter should be provided in order that the fruit may be packed in a cool, dry condition. Growers who have no packing sheds should either build them or arrange to use their barn floors. The wagons should be equipped with springs and cover provided for the protection of the fruit from the weather.

Culls and cider stock should be eliminated from the better grades and as far as possible diverted to cider mills, canneries, and evaporators. While in short-crop years there is a fair demand for low-class apples, still by filling the autumn markets with poor stocks, it is possible to obstruct seriously the disposition of the standard grades, and force into cold storage larger quantities than the conditions may justify. In general, only long-keeping standard pack apples should be placed in the coolers, though it is frequently profitable to store for relatively short periods such sorts as Grimes, Wealthy, and Jonathan, for withdrawal during autumn and early winter as the demand justifies. In packing fruit for storage, special care should be exercised to pick the fruit in sound condition, pack it carefully, and rush it into storage without delay. Such methods add materially to the life of the product.

Owing to geographic location, some important apple-producing States have the natural advantage of an early season. It would be folly for such States not to profit by that advantage. It is possible for growers so situated to leave their crop on the trees until the period of greatest movement, and frequently in years past they have suffered great loss by doing so. The Southern States of the apple belt should begin early and market the portion possible prior to the period of greatest movement, and thereby

## WRITE TO OUR MAIN OFFICE OR SEE OUR AGENT IF YOU HAVE ANYTHING IN THE LINE OF GRAIN TO SELL

Agents at all points on the O. S. L. and Salt Lake Route

### FARMERS GRAIN & MILLING CO.

DAVID ROBBINS, Gen. Mgr.

Suite 601, Judge Building

Salt Lake City, Utah

avoid competition with the producing areas of the northern belt. On the other hand, States that go to market latest should be in no hurry to rush the markets during the period of greatest movement. In brief, the crop should be distributed throughout the longest time possible, cold and dry storage being judiciously utilized for conservation.

Small towns outside of the apple belt are often poorly supplied, even in large crop years. Growers of the Middle West have taken advantage of this condition by going to such towns with cars of apples and selling on the track. In order to succeed with this method the shippers should know conditions of supply and demand in the town selected, ascertain the railway and township regulations controlling track sales, and precede delivery of the car by judicious advertising. The mayor can give information as to whether a license is required, and the railway agent as to whether track sales are allowed.

In so far as the apple grower is concerned, co-operation in distribution and marketing is highly commended as an economic system for securing judicious handling. Of course, it would be impracticable for growers to organize upon the eve of crop movement, because disaster would likely result as the consequence of too little time for perfecting business arrangements. However, in communities where co-operative packing and selling agencies are operated the growers should do all possible to strengthen such exchanges with their patronage and counsel. The disloyalty of members is the chief element of failure in co-operative circles, and apple growers are strongly urged to stand by their associations as the best way to solve the problems that are common to all.

### BE CAREFUL ABOUT MISTAKES

You cannot afford to make mistakes with your customers.

When a plumber makes a mistake, he charges twice for it.

When a lawyer makes a mistake, it's just what he wanted, because he has a chance to try the case all over again.

When an electrician makes a mistake he blames it on induction, because nobody knows what that is.

When a doctor makes a mistake he buries it.

When a judge makes a mistake it becomes the law of the land.

But with the shopkeeper it is different. He has to be careful. He cannot turn his mistake into profit, or into a profession, as other people do.—The Grocer.

Push may be better than a pull, but a lead is always better than a drive.

## SEEDS

FOR FALL PLANTING  
Rye, Turkey Red Wheat,  
Vetch and other Farm  
Seeds

DON'T FORGET  
THE FLOWER GARDEN  
Ask for Free Fall Bulb and  
Seed Catalog.

PORTER-WALTON CO.  
Salt Lake City.

## Fall Rye

and

## Turkey Red Seed Wheat

LOWEST PRICES

**Vogeler Seed Company**

SALT LAKE CITY, UTAH.

## Shoes Repaired by Parcel Post

BIG SAVING IN SHOE BILLS.

Shoes are repaired same day as received and returned by C. O. D. Parcel Post, and delivered to your door. It is just like having a modern, well equipped shoe shop on the place.

We own and operate SEVEN shops, employing more than 30 people. We are the largest shoe repairing company in the West and guarantee to please every customer.

Price list: Mens half soles 75c, ladies half soles 50c, heels straightened 25c, rubber heels 40c and 50c. Patch 10c and up.

It will save the 10c. C. O. D. charge by sending repair charge and postage with order.

**Royal Shoe Repairing Co., Inc.**  
28 So. Main St., Salt Lake City, Utah.

2473 Washington Ave. Ogden, Utah  
7 Main St. Logan, Utah.  
8 Carr Fork, Bingham Canyon, Utah.

FOR SALE:—One Big Bull Tractor. Will guarantee it to pull to twelve inch plows. In good condition.  
H. E. MILLER  
R. D. No. 1, Box 226. Riverton, Utah.

You can't move others to action while you are resting yourself.—Exchange.



### FARM MANAGEMENT PROBLEMS.

(Continued from page six)

acres of fall wheat a few acres of spring barley, or oats and quite an acreage of hay without materially interfering with his beet crop. Why? Because the work necessary on these crops comes at a time when it does not interfere with the labor required on beets. This can be said equally of other crops. One of the greatest handicaps the dry-farmer has is his limited number of economic crops adapted to dry-farming. In his effort to keep himself and teams busy the dry-farmer plows land late in the fall and either plants fall grain very late or grows spring wheat thus reducing his yields.

A dairyman may keep the maximum number of cows on his farm, not being able to support more and yet he may add a small bunch of sheep and a herd of hogs without injuring the dairy herd. The sheep eat up the roughage and weeds which cattle will barely touch. The hogs use the by-products of the dairy herd. The labor distribution is also a big item in this connection.

The amount and grade of pasture land may determine the class of livestock kept on a farm. The distance from market may influence the whole system of farming as to what crops are grown, and what kind of livestock are kept. The price of land may equally influence both kind of crops and type of livestock. The amount and kind of help available are also important.

#### Idle Horses.

The average farm horse in Utah works about two and one-half hours per day. If these horses were men we would consider them lazy. What can be done to help things? Sell the geldings and keep the mares so they can raise a good colt each year to help out in the pay roll. Two and one-half hours of work per day for a brood mare is good exercise. If some entirely idle horses are being kept, sell them off. It may be advisable to change the cropping system so that less horse labor is required at any one time.

#### Inefficient Equipment.

The farmer and his horses often work ineffectively because poor equipment is used. Dull hayknives, dull plow points, rusty machines, loose bolts and bearings all decrease labor efficiency of both man and horse. One farmer with 150 acres of irrigated land was employing two teamsters to drive two single teams on walking plows. One teamster could have driven both teams on a two plow sulky doing the same work with fewer sore feet, better will toward the farmer and save \$2.00 per day for his employer.

#### Business Methods.

Every farm should be handled in a business like way. Labor income should be determined, the business closely analysed and the farm replanned each year. In this way the leaks can be found and stopped and the inflow also increased. Thru these accumulated records taken, the best methods and practices can be carried from farm to farm and from community to community.

"So you are taking summer boarders this year?"

"Yep, we didn't have to, but my wife loves to hear 'em talk that city dialect."

### THE UNUSED ACRE.

"The unused acre is almost as common as farming, and is, everywhere and always, a menace to the business success of the farmer. It lowers the income of the farm; it adds its burden to the tax; it costs for fencing; it levies toll of time and patience; and when the farm is for sale it stands out like a spavin on a horse and depreciates the value. Sometimes it is a thistle-covered hillside that a little time and care would convert into tolerable pasture or profitable woodland; more frequently it is a hog meadow or pasture that a little time with the disc or plow would change into smooth and treble-productive grass land. It wastes valuable property, it breeds a spirit of slackness, it stands out as the visible and ineffaceable sign of the poorly managed and under-productive farm."

#### SWEET CLOVER.

There are few plants which will put run down farms into condition for producing crops as quickly as the once dispised sweet clover.

Because of its nitrogen-gathering habit and the fact that its deep tap roots bring large quantities of mineral plant-food up from the sub-soil, it is one of the best crops available to improve land. If plowed under it makes a fine green manure crop. Sweet clover is a biennial plant and may be used with profit in the rotation of crops. It is being used more extensively each year as a forage crop. It makes excellent pasturage for horses, sheep, cattle and hogs. It may be pastured early and late, and livestock learn to eat it more readily if they are turned into it early. There is little danger of bloating stock on sweet clover, but to be safe avoid pasturing when the clover is damp.

"He is a self-made man, is he not?"  
"Yes, except for the alterations made by his wife and mother."

"I got this cup for running."  
"Whoja you beat?"  
"The owner and six policemen."

#### FEED GRINDING DEMONSTRATIONS A SUCCESS

Hundreds of farmers and livestock men in the vicinity of Pleasant Grove, Provo Bench, Mapleton, Santaquin, Lehi, American Fork, and Alpine, have attended the free feed grinding demonstrations conducted by representatives of the Utah Power and Light Company the past week or ten days.

The company has set up and operated with electric power a feed grinder at each of the towns named above, with the result that many farmers and livestock breeders have shown their interest in this modern and economical method preparing food for livestock, and have attended the exhibitions.

The Utah Power and Light Company has recently issued a small booklet dealing with the feeding of ground feed to pigs, horses, cattle, and other livestock. The title of the book is "Pigs and Men," and copies may be secured by applying to any of the branch offices of the Power Company.



## As Easy to Light As a Gas Jet

To light the **Rayo** lamp you don't have to remove the shade or the chimney; you don't have to risk burnt or oily fingers. The **RAYO** is clean and convenient. Its light is clear and odorless, because it mixes oil and air in just the right proportions.

Dealers everywhere carry the **RAYO**.

### THE CONTINENTAL OIL COMPANY

(Incorporated in Colorado)

Albuquerque      Denver      Salt Lake City      Cheyenne  
Butte      Boise      Pueblo



## October Is Farmers' Month At The Panama Pacific Exposition

Exhibits of special interest to those engaged in Agricultural, Stock raising and Dairying, will be featured.

Low



Rates

VIA THE SALT LAKE ROUTE

From all Utah Stations

TO

**Los Angeles, San Francisco, San Diego**

For particulars consult any Salt Lake Route Agent, or address:

**J. H. MANDERFIELD, A. G. P. A.**  
10 East Third South      Salt Lake City

When you answer the advertisements in this paper tell them you saw adv. it in the Farmer. Always buy advertised goods.



THE FARMERS' MARKET PLACE

For the Buyer

This market place offers our subscribers and readers a very good place to advertise. If you have something to sell or want to buy here is the place to tell it. These advertisements are read because they offer bargains, your bargain should be here. Take advantage of this opportunity today.

For the Seller

THE GEM HERD.

Improved Chester White Swine

The Home of the Western Prize Herd. My winnings at Idaho State Fair 1913, were 13 first, 3 seconds, champion boar and sow, and champion fat barrow. At a Tri-County fair held at Jerome, Ida., I took all but one second. I have anything wanted in Chesters from a weanling pig to a champion boar or sow at prices all can afford. High class stock. Write me. For Reference—all old customers.

GEO. H. LAWSHE.

Falls City, Idaho

FOR SALE

A registered Holstein bull three years old. Gentle and good size. Mostly white. For further information write.

LELAND STEVENS

Oakley Utah

FOR SALE

Foundation Stock in Holstein Fresian's and Duroc Jerseys. Will exchange a few for hay or grain. For breeding and particulars write

JOHN W. STUBBS

R. D. No. 2. Provo, Utah.

REGISTERED JERSEY HEIFERS FOR SALE

We can offer large thrifty bulls from R. M. dams with official tests from 400 to 500 pounds of butter with first calf mated to heifers which we will sell in lots of 5, 10 or 20. Write for prices.

"Production Our Watch Word"

MOUNT OGDEN STOCK FARM A. C. ANDERSON

2532 Polk Ave. Ogden, Utah

WILLOW TREE STOCK FARM P. O. B. 449, Lehi, Berkshires Males or females 2 to 3 months old. Selected from the Masterpiece Premier Herd.. \$10 a piece. None Better. Why pay more.



FOR SALE.

One team percheron colts weigh 13-14 hundred, well broke and good workers. Coming 4 year old.

Apply to

O. ABEL Lewiston, Utah.

DUROC JERSEY SWINE

Sows with or without litters, young pigs, and Boars for service at slaughtered prices.

PULLUM FARM

Trenton Utah

FOR SALE

10 Good Grade Milch Cows. McKay Farm, Huntsville. Telephone Huntsville, 18 J, or Ogden No. 1407.

THE ALLIANCE INVESTMENT CO. SALT LAKE CITY, UTAH

No 11 Main Street.

We buy sell and exchange farms, ranches and city property.

We buy and sell mortgages and bonds.

We write Fire, Automobile and Plate Glass, Insurance.

We will mail you a list of our exchanges free on request.

THE ALLIANCE INVESTMENT CO. Was. 4443 11 Main St.

SALT LAKE CITY, UTAH

IF YOU WANT A BARGAIN "SEE ME"

92 acres near good town in Idaho; house, stable, 50 acres under cultivation, first-class water right for 35 acres. Take it for \$2600, half cash, balance 18 years 6 per cent.

100 acres Sevier county; 4-room stable; part in alfalfa, balance good beet, grain and pasture land; good water right; 1 mile from beet dump. Would also make ideal dairy and stock farm; land near selling for \$100 to \$300 per acre. Cheap at \$4500; \$1500 cash, balance easy.

160 acres first-class land with water right near Preston, Idaho, \$55 per acre; terms, or take part city property.

GEO. W. DANLEY SALT LAKE CITY

707 Walker Bank Bldg. Wasatch 2989.

BARGAINS.

One 16-Horse Steam Tractor.

One 20-Horse Gasoline Tractor.

Have been used for short time, but are in first-class condition.

Write for price and details.

S. PETERSON & CO., 210 So. 6 West, Salt Lake City

UTAH COUNTY FARM

With one-half mile frontage on west side Utah Lake; 160 acres, half cultivated, good soil and water, new six-room bungalow. A beautiful productive farm. A great bargain at \$10,000. Favorable terms.

ED. D. SMITH & SONS

General Agents for Aetna Insurance Co.

Builders of Better Bungalows Dealers in City Real Estate Phone W. 5768 17 Exchange Place SALT LAKE CITY

FRUIT AND GARDEN FARM.

8 acres—part of the old Central Experimental Farm. Only ¼ mile from Lehi, Sego Lily School and Lehi 4th ward meeting house. A farm on edge of Lehi City Limits. 360 apple trees. Prunes, currants, and gooseberry trees.

CASH OR TERMS.

A. F. GAISFORD

Lehi Utah

When you answer the advertisements in this paper tell them you saw it in the Farmer.

RICHARDS' DUROC JERSEYS

WON AT UTAH STATE FAIR, 1915—Grand Champion Boar, Grand Champion Sow, Senior Champion Boar, Senior Champion Sow Eight First Prizes, Five Second Prizes, and Five Third Prizes.

RICHARDS DEFENDER, Grand Champion Boar was pronounced by many cavable judges to be the best Duroc Boar ever brought west. He is 17 months old weighs over 500 pounds. The big type with quality. That's why he has so many admirers.

We purchased Junior Champion Sow and first and second prize under six months sows, so that we now have in our herd practically every first prize winner at the 1915 show.

We can make immediate deliveries of young stock, either sex, from this champion herd at reasonable prices.

Express rates on stock purchased from us is a small item as our ranch is only 135 miles north of Salt Lake City.

RICHARDS' LIVE STOCK COMPANY

VIRGINIA

JESSE S. RICHARDS, Manager:

IDAHO

WANTED

Farm land in exchange for city property.

BRUNEAU-HILL INV. CO.

Was. 1468 343 Main SALT LAKE CITY

FOR SALE

The best hog and dairy farm in Utah containing eighty acres. Also a few very choice duroc boars ready for service.

WILLIAM MERRILL

Richmond Utah

WANTED—Good farm; well located; possession next Spring. Give price and description. W Whitman, Box 754, Chicago.

UINTAH BASIN LANDS

160 acres all cultivatable, full water right Dry Gulch Irrigation Company, 80 acres fenced, house, well, cellar, few trees, 40 acres cultivated. District school 1 mile. Lies 3 miles north Myton. \$4000, \$2000 cash, balance terms.

160 acres, 155 acres cultivatable, full New Hope Irrigation Company water right, 50 acres Dry Gulch Irrigation water right, house and 20 acres alfalfa. District school adjoining. Situated 4 miles north of Myton. Price \$3500. \$750 down balance easy terms.

R. S. COLLETT

Roosevelt Utah

Water Development

WELL DRILLED—ALL SIZES—ALL DEPTHS—WORK GUARANTEED.

Water developed for private, farm, municipal and irrigation purposes.

PUMPING PLANTS

INSTALLED.

DESERET DRILLING CO.

(Incorporated)

office 2nd West and South Temple Salt Lake City, Utah.

Splendid Idaho Ranch

For lease or sale 240 acres of beautiful rich sandy loam with a good water right, located in Jefferson Co., Idaho, near town, railroad and boulevard. Will lease with privilege of buying. Will take \$1000 cash to handle or equal value in city or other property.

Address, G. C. Richter,

With BETTILYON HOME BUILDERS CO.

240-342 Main St., Cor. P. O. Place Was. 2030.

WE MAKE WHAT WE CALL

A Debt Reducing Loan

YOU CAN PAY OFF THE PRINCIPAL GRADUALLY.

MILLER & VIELE

FARMS LOANS

803-7-Kearns Bldg. Salt Lake City.

Money to Loan

On improved farms with primary water rights, at reasonable rates."

INTER-MOUNTAIN LIFE INSURANCE CO.

11th Floor Boston, Bldg. Salt Lake City, Utah.

BUTTER WRAPPERS

We carry a large stock of the Best Vegetable Parchment Butter Wrappers and Especially Prepared Ink for Printing the same. We furnish them Postage Prepaid at the following Prices, money to accompany order.

100	.....	\$ .90
200	.....	\$1.25
500	.....	\$2.00
1000	.....	\$2.75

Send all orders to

THE UTAH FARMER LEHI, UTAH



# Home Visitors Excursions East

Via



November 20 & 23  
December 18 & 22

Limit 90 days  
from date of  
sale

The following low round trip rates apply from Salt Lake City:

Denver	-	-	-	\$22.50
Colorado Springs	-	-	-	22.50
Omaha	-	-	-	40.00
Kansas City	-	-	-	40.00
St. Louis	-	-	-	51.20
Memphis	-	-	-	59.85
Chicago	-	-	-	59.75
Minneapolis or St. Paul	-	-	-	53.85

Proportionately low rates from other O. S. L. points to many other eastern points.

EXCURSIONS DAILY to Pacific Coast points until November 30th, inclusive.

October and November are ideal months in which to visit the Pacific Coast. When you go, go one way via Portland and see the "Beautiful Columbia River Country."

City Ticket Office,  
HOTEL UTAH,  
Salt Lake City, Utah



UT

Ag. Rev.

# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region

OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE

VOLUME XII; No. 13

LEHI AND SALT LAKE CITY, UTAH

OCTOBER 30, 1915



A FIELD OF DRY-FARM OATS PRODUCED UNDER THE SYSTEM OF SCIENTIFIC DRY-FARMING. THOUSANDS OF ACRES OF LAND HAVE BEEN BROUGHT UNDER SUCCESSFUL CULTIVATION BY THIS METHOD.



## What Some of Our Readers Think of the Utah Farmer

**H**ERE is a man who is a farmer and a banker, a man who has read the Utah Farmer since it first began, over eleven years ago. He has given it a test and knows its value. We reproduce below his letter recently sent us.

### St. Anthony Bank & Trust Company

M. J. GRAY, President      THOS. R. HAMER, Vice President  
A. D. MILLER, Vice President      LON A. TUTTLE, Cashier

St. Anthony, Idaho

The Utah Farmer  
Lehi, Utah.

James M. Kirkham  
Manager.

Dear Mr. Kirkham:—

Relative to the merits of the Utah Farmer and how long I have been taking it: First let me say that I have been subscribing for it ever since its inception and I expect to remain a subscriber until I have finished with farming, and that will be, no doubt, when I have passed off this earth.

I consider the Utah Farmer absolutely the best magazine, of an educational character, for the western farmer. This, from the fact that those who are writing for it and attending to its editorial policy are not only the best trained men we have in the country, but are also thoroughly conversant with the needs of the western farmer throughout Idaho, Utah, etc., and their conditions. There are, of course, some other western farm papers, but these cannot carry the weight that the Utah Farmer does as the official organ of the Agricultural College of Utah with Dr. John A. Widtsoe standing as its head. Also, I am fully aware of the fact that your paper is also the official organ of other important agricultural, horticultural, societies throughout the state and these are some few talking points in the paper's favor which other papers cannot boast of.

Every farmer, or person interested in soils, cattle, fruits, plants, etc., should take the Utah Farmer and become familiar with its contents, if they desire to become more acquainted with the best and newest farm methods as applied on the most up-to-date farms.

Again, let me say that the Woman's department in the Utah Farmer is interesting and valuable to the house-wife. My wife would not be without it. Wishing the magazine the continued success which it deserves,

I remain yours sincerely,  
(Signed)      ARNOLD D. MILLER, SR.

One of the Consolidated School Districts have written us stating that at a board meeting it was decided to have a copy of the Utah Farmer sent to every school in the district during the year. There are thirty schools in this district. This is a case where actions speak louder than words.

Now we want our readers to do a little boosting for us and help us get the five thousand new readers we have started out for. You know the value of the Utah Farmer tell your neighbors about it and help us in this campaign and in doing so you are indirectly helping yourself. The Utah Farmer will help anyone who will read it for we deal with local conditions. The things that concern you and your farming problems.

The best writers in this State are contributing to the Utah Farmer. We are for the farmers of this State, we have gained their respect and confidence by helping them. Will you let it help you to be a farmer among farmers—a real farmer—one whom your neighbors will look to for advice and counsel on farm subjects.

Renew today and help secure a new subscriber. A gift or premium will be sent if you attend to this matter today—right now. This will express our appreciation for your prompt action. Address all your letters to the Utah Farmer, Lehi, Utah.



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1904.

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EVERY  
SATURDAY.

# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region.

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VOLUME XII.

LEHI, UTAH, SATURDAY, OCTOBER 30, 1915

No. 15

## Utah County Farmers' Day

A. B. Ballantyne.

The biggest one day excursion for farmers in the state this year was the excursion of the Utah County farmers. The itinerary of the trip was so planned as to present at each place visited some phase or concrete example of some one of the many big problems confronting the agricultural population of the county. These were so correlated as to emphasize the necessity for organized effort on the part of the farmers as well as the business interests of the county.

Most of the places visited were chosen because some particular problem had been or was in the course of solution.

The first stop was made at Santaquin where an up-to-date weir and divider were inspected. Here the necessity and economy of installing accurate measuring and dividing devices were emphasized and the cost of installing the one under consideration was given.

At Ellsworth's Live Stock farm the advantages and superior profits in raising pure bred stock (Duroc hogs especially) was shown. The same principles were brought out in the visit to Dixon's Herefords and here the necessity of securing pure bred range sires co-operatively was emphasized.

At Moore's and Ellsworth's potato patches an illustration of the effectiveness of potato seed treatment was seen and the results of careful seed selection were pointed out.

To afford a contrast with the concrete-lined canals and laterals of the Strawberry Project a drive over the Provo Benches was taken showing the coarse gravelly bottoms and sides of the canals there.

While the farmers ate delicious peaches and sweet grapes R. D. Wadley's farm business was analyzed and the various lines through which he expects to balance the business were pointed out.

From here the party went to W. H. Chipman's and Kirkwood's silos. At the former place Mr. Chipman gave a brief discussion of the value of ensilage in fattening steers.

The possibility of pumping water thirty to forty feet for irrigation was shown at Kirkwoods and later at J. H. Gardners Pawnee Farm. The costs of installation and operation were discussed and the fact pointed out that thousands of acres in the valley could be watered in this way more cheaply than by owning gravity water.

On the return trip part of the farmers visited the model barn of the Cherry-hill Dairy and saw the milking machine in operation.

Thirty-four cars made the trip and

carried a total of one hundred seventy-seven persons, twelve of whom were women. The total distance covered amounted to one hundred ten miles. Spanish Fork, American Fork and Springville furnished the largest



FARMERS LINED UP FOR START.—EXAMINING A BEET FIELD.

crowds, and to the public spirit of the men in these towns was the success of the excursion due.

### TOO BUSY TO READ

He is a familiar type—the fussy, fretful man who imagines that he is about the busiest fellow in town. He often dumps in the waste basket, unwrapped, copies of business and technical magazines that contain valuable articles bearing directly on his problems. He fondly believes that he is too busy practicing to bother with what others are “preaching.”

The trouble with this type of man is that he has not learned that the real executive is the man who so plans his work as to leave a reasonable amount of time for reading and planning.

There are shoals and breakers ahead when the accumulation of new ideas ceases.

The man who declares he has no time to read is unconsciously advertising his small caliber, his slavery to detail, his arrested development.—Canadian Harness Journal.

## Bull Associations

By J. E. Dorman.

One reason why the dairymen in Utah do not have a better class of cows is the difficulty of procuring the services of a bull of real quality at a reasonable price. This is especially true in sections of the State where

better quality than the other members of the herd.

We often hear the statement that like produces like, and if we want the kind of sires that will increase the production of butterfat in their daughters over their dam, we want a pure-bred sire that comes from a long line of cows that have big milk and butterfat records made under official tests. That is the kind of pedigree that counts, and bulls with such breeding cost much more than those that have only papers behind them.

In many communities co-operative breeding associations will provide an efficient and an economical means for solving the problem of herd improvement. One sire could serve several herds and could be kept for a certain period of time at each farm in the community. Another plan is to station the sire the year round at a centrally located farm, to be fed and cared for by one of the members, with an arrangement as to the expense as agreed upon by all the members. In this way the cost is small.

In larger dairy communities where there are more herds than one bull could serve, such associations would be of greater benefit. The plan of owning several bulls could be followed and have them transferred from one community to another when a change of blood would be beneficial.

Community breeding clubs are being organized in many parts of the country and dairymen who are working toward herd improvement with an eye to economy and efficiency will do well to look into this proposition.

Suggestions, rules and plans or any information in organizing such associations may be had through the Extension Department of the Agricultural College at Logan, Utah, or from the Dairy Division, U. S. Department of Agriculture, 318 Federal Building, Salt Lake City, Utah.

### WHEAT FOR HOGS.

Much wheat that the farmer raises is often rendered unfit for the market either through being frozen, sprouting in the stack, or being dirty or shrunken.

This wheat can be fed to hogs with profit. Recent feeding tests have shown that wheat fed alone, though it be damaged, gave greater gains in fattening hogs than either corn alone, or wheat and corn mixed.

The wheat is better digested if ground. Three pecks of soaked ground wheat produce as much gain as a bushel of soaked unground wheat.



## DAIRYING

### BETTER GRADE COWS

I want to make an appeal for the dairy cow. And when I speak of a dairy cow, I mean the grade cow. I will not waste any time talking about pure bred cows—you have many men who keep them, and they will tell you all about them—extol their virtues. Let them do it. But my idea of the dairy cow is a high grade cow, no matter what breed, that is a producer of dairy products. It is the grade cow that must produce the food of the nation. Only five per cent of the cows of the average state of the Union are purebred. You hear a lot about this class of cows at banquets and other places, but it is not to this class that I refer. I have no prejudices against pure-breds—but I like to be in the majority and stand for the work that is in the majority, and leave the majority out in the cold.

The grade cow, as she has been brought up during the past ten or fifteen years, is the one that is familiar to you. She is the kind you can afford; she is within the reach of all; while if you have pure bred you have to go down in your pockets to the tune of \$200, \$300 and even \$500, and the majority can not afford it. But any man who is a keeper of cows, and it makes no difference what the breed may be, or what foundation stock may be, let him make up his mind what breed he will take, then start in with a pure-bred sire, and breed up, for the sire is 50 per cent of the herd. No matter what the foundation of the herd may be—even though they are but scrubs—using a good pure-bred sire will cause them to advance and improve very rapidly, and the first cross will cause a 50 per cent better cow that before and in time, by proper selection and mating, you will have a cow that will yield a profit.

My next appeal is for better care of the cow. And in order to get better treatment, we must have better men in charge of the cows both owners and caretakers. If you are going to run a campaign of education on the cow, first run it on the man, then there will be no trouble. The government statistics show that 50 per cent of the cows do not pay for their board—never earned anything to pay their board with. I have purchased cows that

were never known to produce more than 35 pounds of milk a day—they never had a chance to pay their board. In the last few years we have purchased cows that had never been known to produce more than 35 pounds but the next year, by proper treatment, they would increase to 40, and the next year to 45 and even 50, and some of these very cows that we purchased three years ago are now yielding as high as 60 pounds of milk per day. We figure that the cost of raising a cow is from \$50 to \$60, and this should be a product that is worth \$100.

In the care of the cow, I think we have all talked a good deal about light, ventilation and things of that kind, but I want to hear something more about the cleanliness of the animal, because it adds to the value of our product more than all other things. One of the main things I find is in properly bedding the cow, and the proper arrangement of stanchions and stalls. One objects when a cow switches her tail—that it was bad because of the dirt—but I would have her tail so clean that if she switched it, and it wound around my neck, I would just let it stay there. My cows, are tied in stanchions, well bedded, and curried every day. The more currying you give a cow, the better—it will more than pay for itself in extra yield of milk, and then the improved looks of the cow will also pay for the time taken, so when a person get double pay for a thing, he should not seriously object.

We hear a good deal about hard times, but the man who is keeping the cow is not worrying very much about that. He has plenty to do. I never saw a first class article produced for which there was not a demand, and dairy products are not exception.

Another thing that will aid in producing more and better milk is to give the cow more water. Some years ago we put this thing to a practical test—we were milking 30 cows, and we found that increased quantities of water given them increased the supply from the 30 cows some five gallons of milk per day.

My appeal is for better care of the cow, better education, kinder treatment of the cow, proper breeding. Then you will have the mortgage lifter, that which will give you prosperity, no matter what the times may be. For there are more staying qualities in the dairy business than in any other branch of farming.—Address by F. H. Vanderboom, at the Michigan Dairymen's convention.

### CARE OF CALVES.

Calf raising is a fundamental part of dairy industry. Our present day problem of raising calves is a much more complicated one than formerly because very little whole milk is fed. In this circular we will briefly discuss some of the most important points to be borne in mind in caring for calves.

Immediately after birth the navel of the calf should be washed with an antiseptic solution and tied with a silk thread in order to prevent infection. For the first feed the calf should have its mother's milk for several feeds thereafter. The sooner the weaning takes place the better, but

ordinarily it should not be postponed later than the fourth day. The sooner the calf is weaned the more easily it is taught to drink. When first fed from the pail, 8 to 10 pounds of milk a day, fresh and warm from the cow, and divided into two feeds, are sufficient. The feeding times should be as nearly regular as possible, and at first it is advisable to feed more than twice a day. The amount fed should be constant, and to insure this scales should be used, as variation tends to get the digestive organs out of order. At all times the utmost care should be taken to prevent any digestive disorder, as all such trouble hinders the growth and development of the animal. Calf scours is the most common indication of this condition.

The following named precautions, to a great extent tend to prevent scours:

Feed regularly.

Be sure that the milk is always sweet and warm.

In feeding use only clean pails.

Feed the calf a little less than it wants.

Reduce the amount of milk one-half if the animal becomes sick.

The amount of milk fed can be gradually increased until at the end of the second week the calf receives from 14 to 16 pounds of milk a day. At this time the gradual substitution of skim milk for whole milk may commence. Hay and grain should be placed before the calf at this period and it will be found to nibble at them a little. At the end of the third week the substitution of the skim milk will be complete. By slow changes the milk can be increased thereafter until 20 pounds a day are fed; this amount will be found sufficient when fed with the grain and hay. If skim milk is plentiful more may be fed, but the added amount will not give proportionately better results.

Corn meal, bran, and oil meal, mixed in the proportion of three, two, and one, make an excellent grain mixture. This grain when fed with plenty of fine clover hay makes an ideal supplement to skim milk in balancing the ration. Calves should be allowed all the grain that they will eat until they consume 3 pounds a day; from this point the feeder should use his judgment as to whether an increase is justified.

The calf, from the time it is two weeks of age, should always have access to plenty of clean, pure water.

The general practice is to feed calves skim milk for from two to six months. In the latter case, with fall calves the time of final weaning from milk comes in the spring, when pastures are ready. Under this system the calves usually make excellent growth during the entire period without any break in gains.


Careful attention during the first two weeks often means the difference between a sickly, undersized, stunted animal and a large, well developed one when it enters the herd as a milking cow.

### BOSSY MAKES THE MOTOR GO

By J. C. Burton, in Wisconsin Motorist  
If the following jingle is true in Wisconsin, why should it not be made true in Utah? There is money to be made in dairying if the proper mixture of brains and cows is made. Now bossy makes the motor go up in the Badger State  
And dairymen are prospects for the four, the six, the eight;

# LOUDEN

**NEW CATALOGS**  
Dairy Barn Equipment—  
Louden Barn Plans—  
Litter & Feed Carriers  
Hay Tools—Horse Stable  
Equipment



**WE LOUDEN**  
Originator of Modern  
Barn Equipment

Louden Stalls and Stanchions give the cows true Pasture Comfort. The single slack chain at top and bottom of stanchion permits the cow to turn her head freely in any direction. No cracks or crevices in the construction to catch and hold dirt. High Built-Up Curb (11 inches) keeps cows from nosing out feed and wasting it.

Louden Litter Carriers pay for themselves in a few months. The boy can do a man's work; no loss of liquid manure; no dangerous ratchets or brakes to get out of order; carrier stands safely at any height, loaded or empty; one pound pull on hoisting chain raises forty pounds in the box.

**New Free Books**  
Louden Barn Plans may be worth hundreds of dollars to you if you build a barn. Fifty-six barn plans, hog houses, hay sheds, etc., described in detail. It is free if you will tell us how many cows, horses and other stock you want to house. Louden Dairy Barn Equipment Catalog is the most complete book on the subject ever published. It is full of common-sense facts that every dairyman should know. Louden Litter, Feed, Merchandise and Milk Can Carrier Catalog is chock-full of dollar-saving information on carriers. Send for it. Discard the disagreeable wheelbarrow for the "Louden Way."

**The Louden Machinery Company, (186)**  
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## Do You Churn Butter

FOR THE MARKET?

Write us

**Strevell-Paterson  
Hardware Co.**

**Salt Lake City, Utah.**

The herds of lowing Jerseys and the sad-eyed Belted Dutch

Put gas'line in the fuel tank and coal oil in the clutch;

At sunrise buxom milkmaids to the dew-kissed meadows steal;

At sunset, all are movie-bound abaft the steering wheel.

The cattle of Wisconsin, unlike other grazing herds,

Produce coupes and limousiness instead of cream and curds;

Each Guernsey has a battery imbedded in its throat

And does not moo like common kine, but sound a warning note;

And when it seeks the pasture at the dawn of golden morn,

The bell cow does not wear a bell but toots of motor horn.

For bossy pays rich dividends and makes the engine throb

And farmers will wear goggles there with milch cows on the job;

Each can of milk, each butter tub, each pound of fragrant cheese

Adds to the song of plenty that the rural motors wheeze;

The banks are choked with coin and the roads are choked with cars—

The Milky Way is worshipped when the Badgers bless their stars.

If you are hesitating  
about investments

put your money in a savings account until you need it for some other purpose.

Safe, pays 4 per cent, and available when you want it.



**Walker Brothers  
Bankers**

Salt Lake City

Founded 1859. "A Tower of Strength."



## Agriculture Lesson XI

Prof. J. C. Hogenson.

### Plant Nutrition and its Relation to the Soil.

It is a natural law that every portion of a solution must be alike, so that if water evaporates from the leaves, or is used up in making plant tissue, the solution immediately surrounding these places becomes either more concentrated, as in the case of the leaves, or else more dilute, as in the case of the formation of plant tissue. As soon as this occurs a movement of diffusion is set up, which draws on the source of the solution at the roots and this diffusion does not cease until a balance has again been reached so that there is again as concentrated a solution in one portion of the plant as in another. The movement of soil water on the outside of the plant is explained in the same way. Water and mineral substances are constantly being absorbed by the plant roots, this causes a general movement of the soil water toward the plant roots so as to keep an equal amount of soil water in every part of the soil.

The roots of plants are great foragers, they search about in the soil for long distances to get food and water. It is said that alfalfa roots will continue to grow down until a sufficient supply of water is reached. There are two general types of roots: (1) Tap root, consisting of one or more large roots which grow straight down into the ground, as the alfalfa root. (2) fibrous roots, like the roots of grains and grasses, which consist of a large number of small roots that remain comparatively near the surface of the ground.

The roots of corn have been traced for eight feet into the soil and as far in a lateral direction. The main root surface of corn, however, develops within 8 inches of the surface of the soil. Wheat roots penetrate to the depth of 8 feet or more; oats about four feet; grasses from one to four feet, depending upon the variety. Legume usually penetrate the soil to great depths, say from four to twenty feet at least. The roots of

tuberous crops extend more in a lateral direction than in depth.

The structure and texture of the soil has a great effect upon the development of the roots of plants grown upon it. Plants which have naturally a deep tap root, if planted in a shallow soil where the subsoil is impermeable, will develop a thick, stunted, abnormal root. Coarse and loose soils usually cause the development of more fibrous roots because the root have to search over more ground to find food, while in a fine clay soil not so many roots are developed because plenty of food and moisture are found within a small radius. Cultivation has a tendency to loosen up the soil and so cause the development of more fibrous roots; drainage causes the development of a deeper and larger root system, as does also irrigation, though care must be taken in irrigating to allow plenty of water to soak into the soil so that the deep roots as well as shallow ones will be supplied. If this is not done only the hallow roots will be supplied and these will grow at the expense of the deeper ones, thus causing the plant to become shallow rooted.

### EFFECTS OF DIFFERENT LININGS ON SEEPAGE.

Prof. B. A. Etcheverry of the University of California has just published the following statement:

To prevent the seepage obtained in unlined canals, linings of different materials have been tried. Those used or experimented with are concrete, wood, oils, and clay puddle. From investigations made by the writer in 1906 for the Irrigation Investigation and the California Experiment Station, and from more recent experience on the efficiency of the different types of linings, the following results can be anticipated:

1. A good oil lining, constructed with heavy asphalt road oil, applied on the ditch sides and bed at the rate of about 3 gallons per square yard, will stop 50 to 60 percent of the seepage.
2. A well constructed clay puddle lining is as efficient as a good oil lining.
3. A thin cement motor lining about 1 inch thick, made of one part cement to four of sand, will prevent 75 per cent of the seepage.
4. A first-class concrete lining, 3 inches thick, made of one part of cement to two of sand and four of gravel, will stop 95 per cent of the seepage.
5. A wooden lining, when new, is as efficient as a concrete lining, but after two or three years repairs and maintenance will become an important item, and by the end of eight or ten years it will necessitate complete renewal.

The cost of an oil lining where oil can be bought at California prices (about 2 cents a gallon) is about 1/2 cent per square foot. Cement mortar lining 1 inch thick costs about 2 to 4 cents per square foot. Cement concrete 2 inches thick costs from about 4 to 6 cents, and 3 inches thick from about 6 to 8 cents a square foot. These prices do not include the trimming and preparation of the ditch before the lining is put on, which would add from 3/4 to 1 1/2 cents per square foot. The cost of a clay lining depends greatly on the nearness of the canal to suitable clay. If clay is close at hand it can be hauled and spread

on the canal, then either tramped in by cattle or worked in by dragging chains over it, at a cost of less than 1 cent per square foot, but there are localities where enough money has been spent on clay linings to pay for a good concrete lining. Wooden lining has been used in very few cases, and the cost of such a lining built of 2-inch lumber nailed on sills and side yokes will often be as much as that of a 2-inch concrete lining and not nearly as durable.

The disadvantages of the cheaper linings are the following: An oil lining stops only a part of the seepage losses, and while it will resist erosion well, it probably will not prevent the growth of weeds for more than one season unless a high velocity is used, and it will not stop the activities of burrowing animals. Oil linings have not been sufficiently tested to determine their durability. Clay puddle will not prevent the burrowing of animals and weeds grow rapidly, especially since the velocity of the water must be small in order to prevent the eroding or washing of the lining.

### Advantages of Concrete Lining.

A concrete lining has none of the above disadvantages, and it meets the requirements of a good lining better than any other material. The only objection is its higher first cost. But where water is valuable its expense is well justified. In southern California the use of concrete lining dates from about 1880, when the increasing value of water made it necessary to do away with losses. Since that time practically all canals in that section have been lined with concrete, and in some cases replaced with concrete pipes. Until recently very little concrete lining had been used outside of that region, but during the last few years concrete lined canals have been constructed on many of the projects of the U. S. Reclamation Service and on numerous private projects.

The feasibility of using concrete linings will depend on the extent and value of the water loss and on the necessity for prevention of waterlogging of the land below by the seepage water. Other benefits which must be considered are the decreased cost of maintenance and operation and the greater safety. There are no weeds to contend with, no breaks to mend, and consequently the cost of patrolling is largely eliminated. It must also be remembered that a higher velocity can be given to the water in a concrete lined canal, and a smaller and better form of canal can be used, which, especially on a sidehill, will materially decrease the cost of excavation. But even when only the value of the water loss is considered, it does not require a large loss nor a very high price for water for this annual value to represent the interest and depreciation on a capital sufficient to put in a first-class concrete lining.

An American and a Scotsman were discussing the cold experienced in winter in the North of Scotland.

"Why, it's nothing at all compared to the cold we have in the States," said the American. "I can recollect one winter, when a sheep, jumping from a hillock into a field, became suddenly frozen on the way, and stuck in the air like a mass of ice."

"But, man," exclaimed the Scotsman, "the law of gravity wouldn't allow that."

"I know that," replied the Ameri-



## The Life of Your Ford Depends On the Oil Used

—By The Oil Philosopher.

Everything depends on the oil you select for your Ford if you desire to protect your investment and maintain highest efficiency. Ford owners should never order "oil" when it is so important to say—

## Simplex "Ford Special" Auto Oil

This oil is manufactured especially for Ford cars. Our expert refiners experimented with Ford cars until they produced an oil that would meet every lubricating problem of this popular automobile.

Better oil cannot be made for Ford cars, or we would make it. We have material, the experience, the facilities and the men.

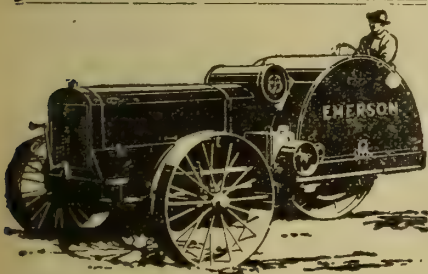
If your dealers should happen to be out of stock, write the Utah Oil Refining Company, Salt Lake City, and it will see that you are supplied.

can; "but the law of gravity was frozen, too."

The Archbishop had preached a fine sermon on married life and its beauties. Two old Irish women were heard coming out of church commenting on the address.

"'Tis a fine sermon his Rivinence would be after giving us," said one to the other.

"It is, indeade," was the quick reply. "and I wish I knew as little about the matter as he does."



## EMERSON Farm Tractor

Model L-12-20 Horse Power

A four-cylinder, 2-speed light weight tractor of great power, suitable for any size farm. Will pull the implements you now have on your farm—gang plows, harrows, mowers, binders, manure spreaders, road drags or graders. Will also operate your ensilage cutter, feed grinder, circular saw, etc. Does more work than horses—costs less and is so simple anyone can run it.

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Illustrated in Colors

WE CARRY LARGER SIZES

Miller-Cahoon Co.

Murray, Utah

Idaho Falls, Idaho



# Farm Management Demonstrations

By E. B. Brossard, State Farm Management Demonstration Agent.

(CONTINUED FROM LAST WEEK)

**Report of the Farms of the Sandy Area, Salt Lake County, Utah.**

The 73 records of the Salt Lake County Area were taken by Mr. E. B. Brossard, Farm Management Demonstration Agent, Mr. H. J. Webb, County Agricultural Agent, and Dr. R. J. Evans, State Leader of County Agricultural Agents. The average Labor Income of the 72 farms included in the tabulation was found to be \$373.00 the average labor income of the 10 better paying farms \$1,399.00. The following is a business statement of Capital, Receipts, and Expenses, etc. of the average of the 10 better paying farms:

Total Capital invested in the business	\$26,902.00
Total Farm Receipts	4,667.00
Total Farm Expenses	1,923.00
Total Farm Income (Receipts minus expenses)	\$ 2,744.00
Income from Capital (5% interest on Capital)	1,345.00
LABOR INCOME	1,399.00

Labor Income is what the farmer receives from his years work. It is obtained by subtracting from the Gross Farm Receipts, the sum of the total Farm Expenses and 5% interest on the capital invested in the business.

Besides his Labor Income the farmer gets all the farm produces towards the family living, such as house to live in, milk, butter, meat, eggs, vegetables, fruits etc. etc. The Salt Lake County records must not be compared with the Hyde Park records nor Hinckley records because of the great difference existing between these areas in price of land, markets, and other agricultural conditions. The Labor Incomes made in the Salt Lake County area are good, but as in every other area thus far surveyed they can be materially increased.

In order to demonstrate the factors which contributed towards the larger labor incomes in this district, the average of ten better paying farms was compared with the average of all 72 farms included in the tabulation, with reference to Diversity of Business, Size of Business, and Quality of Business.

**Diversity of Business on Farms of Sandy Area.**

The Diversity of Business, on the average of all 72 farms and the average of 10 better paying farms of this area is practically the same. Both have two sources of income over ten per cent of their Gross Farm Receipts. On the better paying farms, however, the sources are: milk and butter \$1,035.00; and grain \$704.00, while on the average farm they are "Other Live-stock" \$272.00 and "Grain" \$301.00. There is a difference in the sources of income, on the better paying farm, one important source of income is "milk and butter," while on the average farm it is "Other Live-stock." This would indicate that dairying as an important source of income had greater possibilities.

**Size of Business on Farms of the Sandy Area.**

Size of business has contributed largely towards the larger labor incomes in the Sandy Area. The following

figures show the difference in the Size of Business on the average of the ten better paying farms and the average of all seventy-two farms included in the tabulations made of the Sandy Area.

he pays \$6.00 for the job of feeding each \$100.00 worth of feed fed on his farm. This of course shows a vast difference in live-stock in favor of the better farm. It shows also that the farmer making the most money in

	Average of 10 better paying farms.	Average of all 72 farms.
Total Capital invested	\$26,902	\$15,828
Total Acres	130	100
Total Crop Acres	104	55
Total No. Acres in Sugar Beets	4.05	2.91
Total No. Men	2.57	1.72
Total No. Milch Cows	8.85	4.44
Total No. Work Horses	6.55	4.10
*Total Productive Animal Units	22.40	15.32
LABOR INCOME	1,399.00	373.00

From this comparison we see that the average of the better paying farms has 49 more "Crop Acres" than the average farm, 1.14 more "Acres Sugar-Beets," 4.41 more "Milch Cows," 7.08 more "Productive Animal Units."

The average of the ten better paying farms makes more profit than the average farm in the Sandy Area, "First," because of a larger Size of Business, especially in the "Total No. of Acres," "Total No. of Crop Acres" and the "No. of Productive Live-stock" including milch cows, and Second because of the better quality of the farm business, shown in the following paragraph.

the Sandy Area feeds very much more economically and therefore more profitably.

The crop yields vary but very little. The principal cash crop as is seen from the "Diversity of Business" was grain. More wheat was sold than any other kind of grain, and the average yield per acre of wheat is higher on the average farm than on the better paying farm by 6 bushels. The wheat was all of about the same quality and therefore had about the same value. From these figures one would conclude that higher yields per acre of wheat did not contribute towards the larger labor income. But the figures indicate the adverse, that

Quality of Business on Farms of Sandy Area.		
	Average of 10 better paying farms.	Average of all 72 farms.
Milk Receipts per cow	\$ 117.00	53.00
**Cattle Receipts per head	32.00	25.00
**Net Live-Stock Receipts per P. A. U.	86.00	48.00
Net Live-Stock Receipts per \$100 feed fed	148.00	94.00
Crop Receipts per Crop Acre	17.50	16.72
Crop Yields per Acre		
Potatoes	135 bu.	113 bu.
Wheat	21 bu.	27 bu.
Oats	51 bu.	41 bu.
Barley	48 bu.	46 bu.
Alfalfa	3.7 tons	3.4 tons
Other Hay	3.1 tons	2.8 tons
Sugar Beets	15.4 tons	12.1 tons
Productive Animal Units per man	8.7	8.9
Crop Acres per man	40.5	32.1
Crop Acres per horse	15.9	13.1
LABOR INCOME	\$1,399.00	\$373.00

\*\*It will be seen from the foregoing figures that there are \$64.00 more "Milk Receipts Per Cow" on the better farm than on the average farm. Also the better paying farm receives \$7.00 more "Cattle Receipts per head." The better farm receives \$38.00 more "Net Live Stock Receipts per Productive Animal Unit" than does the average farm. This shows a decidedly better quality of Live-stock, and a better quality of milch cows.

The fourth item shows that for every \$100 worth of feed fed, the better farmer receives from his live-stock \$148.00. That is he makes \$48.00 as wages for feeding to his livestock \$100.00 worth of the various feeds fed. On the average farm the operator receives only \$94.00 in return for each \$100 worth of feed fed. That is to say that he does not get back from his livestock the value of the feed fed to them. In other words

wheat yields were in favor of the average farm. The average of the 10 better farms had considerable dry farm wheat which made their yields lower than the average of all 72 farms. The difference in the yields of sugar beets per acre was 3.2 tons in favor of the better paying farms. The work on the better paying farm and the average farm is shown to be in favor of the average farm in "Productive Animal Units" per man" and in favor of the better paying farm in "Crop Acres per Man" and "In Crop Acres per horse."

## Most Important Points Demonstrated to Salt Lake County Farmers.

The points of most importance demonstrated to the farmers of the Sandy Area, Salt Lake County are: 1st. The large Size of Business contributes, under average conditions towards a larger labor income. That

is to say that up to a certain point in Size, under average conditions, the larger the business the greater the profits. 2nd, that better Quality of Business has contributed very materially towards the larger Labor Income on the average of the ten better paying farms. That a good quality of milch cows and "Other Livestock" when fed carefully and managed well are perhaps the greatest factors contributing to the larger labor incomes. 3rd, that a good Diversity of Business must be maintained in order to feed the Live-stock and keep the land in good condition, and that the best Diversity includes one cash crop, the receipts from which are equal to 10% of the Gross Farm Receipts. These factors are of paramount importance to all farmers included in the Sandy Area.

## Records of the Years Business on the Average of 10 Better Paying Millard County Farms. For the Year Ending Jan. 1 1915.

The 60 records included in the Hinckley Area of Millard County were taken by Mr. E. B. Brossard, State Farm Management Demonstration Agent, and Mr. J. P. Welch, Millard County Agricultural Agent.

The following is a business statement of the Capital, Receipts, Expenses, Total Farm Income, Income from Capital, and Labor Income for the average of the 10 better paying farms of this Area.

Total Capital invested in the business	\$11,828.00
Total Farm Receipts	2,838.00
Total Farm Expenses	489.00
Total Farm Income (Receipts minus Expenses)	2,349.00
Income From Capital (5% interest on investment)	591.00
LABOR INCOME	1,758.00

The average Labor Income of the 10 better paying farms of the Hinckley Area is \$1,758.00. The average Labor Income for all 59 farms is \$613.00. As in each of the other two areas reported above there are certain definite reasons for this difference in Labor Income. In order to demonstrate the Factors which contributed towards the larger Labor Incomes of farms were compared according to "Size of Business" "Quality of Business" and "Diversity of Business." The measure of these Factors which were used, however, were a little different in the Hinckley Area, since the type of Agriculture practiced there is different from either of the other two areas. As in the other areas it was shown in the Hinckley Area that "Size of Business" was the greatest factor in making the greater profits. The following is

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A statement of the Factors used in demonstrating, "Size of Business."

The above figures show that it was not quality of live-stock which con-

sity of Business and its effect upon Labor Income:

profitable basis. They are to be given credit for the success of the

Size of Business on Farms of Hinckley Area Millard County.	Average of 10 better paying farms.		Average of all 59 farms.	
Total Capital Invested	\$11,828.00		\$9,650.00	
Total Acres	163		153	
Total Crop Acres	78		52	
Total No. of Acres in Alfalfa	56.4		34.6	
Total No. Bushel Alfalfa Seed	138.1		49.3	
Total No. Milch Cows	6.1		4.7	
Total No. Work Horses	3.8		3.5	
*Total Productive Animal Units	17.9		13.3	
LABOR INCOME	1,758.00		613.00	

These figures show the better farm to have on an average, 10 acres more land, 26 acres more land under cultivation, 21.8 acres more in alfalfa, 88.8 bushels more of alfalfa seed, 1.4 more milch cows, and only .3 more work horses, despite their larger area under cultivation. They have also 4.6 more productive animal units. These factors demonstrate the fact that under average conditions larger Size of Business contributed towards greater profits.

It must be said, with respect to this area that 1914 was an exceptionally good year for alfalfa seed. The crops of alfalfa seed of the Hinckley Area are not obtained by the average farmer, every year. The price of alfalfa seed last year was about 50% better than usual. The good crop of alfalfa seed and the abnormal price were perhaps the largest factors contributing towards the large labor income for that area last year.

The records for another year might place the farms growing alfalfa seed among the average farms and place ten stock farms as having the best Labor Income or it might be that the men growing alfalfa hay for sale as their main cash crop might dominate the ranks of the ten better paying farms. It is very possible to believe also that the men raising turkey red wheat might also have the larger labor incomes. This year being abnormal in the Hinckley Area, makes it difficult to state, from the records which were obtained, just what type of farming would be best to practice year after year in that community. It is possible however, to state definitely, that those farms which made the larger labor incomes for last year, 1914 had a larger business than the average farmer.

tributed towards the larger labor incomes of ten better paying farms of 1914. The Quality of Live-stock was about as good on the average farm as it was on the better paying farm. However, the better farmer got \$61.14 profit from each \$100.00 worth of feed fed to his live-stock. The average farmer got \$30.00. These figures show that for the money put into the feeding of the live-stock the better farmer got on an average \$31.05 more profit out of each \$100 worth of feed fed. The greatest difference in these records comes in the "Quality of Crops." The better paying farms got \$8.02 more "Crop Receipts per Crop Acre" than the Average Farmer. His "Receipts from Alfalfa Seed per Acre" were \$7.66 more than the average farm. The "Crop Yields per Acre" other than alfalfa seed did not contribute towards the Larger Labor Income.

The Larger Size of Business and more efficient man and horse labor has made "The Productive Animal Units per man," "Crop Acres per Man" and "Crop Acres per Horse" greater on the better paying farm than on the average farm.

Diversity of Business on the Farms of the Hinckley Area, Millard County.

The following statement shows the comparative Diversity of Business of the average of the 10 better paying farms of the Hinckley Area and the average of all 59 farms included in the tabulations. The 10 better paying farms were also included in the average of all 59 farms. This is true with each of the areas surveyed. The better paying farms were also included in the general average.

The following statement is concise and demonstrates clearly the Diver-

Quality of Business on the Farms of the Hinckley Area Millard County.			
	Average 10 better paying farms.		Average of all 59 farms.
Milk Receipts per cow	\$ 17.44		\$ 23.58
**Cattle Receipts per head	27.73		25.95
*Net Live-Stock receipts per \$100 feed fed	161.14		130.09
Net Live-Stock Receipts per P. A. U.	42.89		40.11
Crop Receipts per Crop Acre	20.81		12.79
Receipts from Alfalfa Seed per acre	43.54		35.94
Crop Yields per Acre			
rotatoes	55 bu.		49 bu.
Spring Wheat	10 bu.		6 bu.
Fall Wheat	11 bu.		23 bu.
Oats	20 bu.		16 bu.
Rye	0 bu.		13 bu.
Alfalfa	2.2 tons		2.2 tons
Alfalfa Chaff	.7 tons		.8 tons
Productive Animal Units per man	14.1		11.3
Crop Acres per man	61.0		44.6
Crop Acres per horse	20.2		14.9
LABOR INCOME	\$1,758.00		\$613.00

\*Does not include work horses. One animal unit is one cow, bull, steer, or two young cattle, one horse, two colts, seven sheep, fourteen lambs, five hogs, ten pigs or one hundred poultry, figured on the basis that each animal unit requires the same amount of feed as determined by investigations.

\*\*Does not include milch cows.

Sources of Income over 10% of Gross Receipts.

	Average of 10 better paying farms.	Average of all 59 farms.
No. Sources Income	6.3	5.2
No. Crops Grown	4.3	4.
No. Sources Income over 10% of Gross Receipts	3.	3.
Alfalfa seed	\$1,019.00	\$340.00
Hay	531.00	244.00
Cattle	329.00	186.00
LABOR INCOME	1,758.00	\$613.00

The better farm has 1.1 more sources of income than the average farm. It has also .3 more crops grown. (These figures are averages, therefore we have these fractions). On the whole however, the diversity of the farming business has not been a very great factor in determining the profits as demonstrated by these figures.

#### Results in General of the Three Surveys.

The general results of these Farm Management Demonstrations are twofold: 1st. They have demonstrated to the farmers co-operating in the work, the effect of certain Efficiency Factors, such as Size of Business, Quality of Business and Diversity of Business upon the Labor Income, and 2nd, they have increased materially the efficiency of the County Agricultural Agents.

It must be borne in mind constantly that not all large farms make the most money, many large farms, on the contrary lose money. On the average however, the large farming business offers better possibilities for making a large labor income.

The small farms visa-versa, do not all lose money, nor are their possibilities limited to small Labor Incomes. There are some small farmers who make enormous labor incomes. But, on the average and under average conditions the farmer with a small sized business is not as likely to make a large labor income as is the farmer who has a large business.

The farmers throughout the Counties who have co-operated in the Farm Management Demonstrations are very much interested in it. They have co-operated very heartily. We have found them to be broad minded and liberal men. They are also very practical men and therefore, welcome any assistance which we are able to give to them in order to increase the profits of their farms.

There were only two farmers in all of the seven counties in which surveys have been made, who were not glad to have their records taken, analyzed and compared with the other farm records of their respective communities. This hesitancy on the part of these two men, I am sure, was due to a misunderstanding of the purpose of the records.

Every farmer who has co-operated in this great work has expressed himself as believing thoroughly in it and desiring that it be continued. Many have said that it is the greatest Educational Enterprise that is being promoted in the land today.

The County Agricultural Agents are unanimous in backing the work. They, of course, take most of the records which are taken in their respective counties. They act as advisors to the farmers in carrying out the suggestions made towards the reorganization of the farming business on the more Farm Management Demonstration in

their respective counties. They are the men who are on the firing line, and who actually co-operate with the farmers in making a more profitable farm business.

The work in these three areas and with these same farmers will be continued for a series of at least five years. Demonstrations will be made each year in each county. Other demonstrations will be made throughout the various counties of the State as soon as funds are made available for the payment work. The various counties in the State desiring to have this work done may do so by making the proper arrangements with Dr. E. G. Peterson, Director of Extension work at the Utah Agricultural College.

#### CELEBRATING.

"Pa wants a bottle o' liniment and maw wants a bottle o' china cement, right away."

"All right, sonny. What's wrong?"

"Maw hit paw with the sugar bowl."

—Judge.

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#### OFFICIAL ORGAN

Utah Horticultural Society, Utah State Dairymen's Association, Utah State Bee Keepers' Association, Bear River Valley Farmers' Protective and Commercial Association, Agricultural College Extension Department and Utah State Fair Association, Utah-Idaho Millers' and Grain Dealers' Association, Utah Fruit Growers Association.

#### OUR GUARANTEE

We guarantee every subscriber against loss thru dishonesty or attempted swindle by any advertiser in this publication. We do not attempt, however, to adjust trifling differences between the subscribers and honest, responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within thirty days from date of the transaction, and the subscriber must have mentioned Utah Farmer when writing the advertiser.

The average life of the ordinary walking plow is a little less than 12 years.

A rank growth of weeds becomes an asset when plowed under before they make seed.

Speaking of a quartette here is one that has been suggested for the small farm; dairy cows, fruit trees, poultry and bees. He says it is an excellent combination and a sure winner on a forty-acre farm.

If you find the Utah Farmer helpful and interesting will you not say a good word for it to your neighbor, who does not get the paper. You will do him a favor and help to boost our circulation. The greater the number of subscribers the more advertising we can secure and in turn we will be able to publish a better paper. Help a good move along, the time to do it is—now.

If anyone desires to keep a few boxes of apples for family use, it will pay to wrap the fruit when cool and dry in paper and pack carefully in bushel boxes. Then put the boxes in a cool, dry room, the cooler the better, just so the temperature does not get down to freezing. The wrapping paper should be large enough to completely cover each apple so as to prevent contamination of sound apples from any that may have become decayed.

"Don't be a scrub" is a good motto for any man. "Don't have a scrub" is a good motto for every farmer. Too many of our western farm-

ers are satisfied with grade bulls and boars and stallions.

Don't breed a grade when you can get a pure bred for a few dollars more. You can generally depend upon a pure bred to breed true to type—to reproduce his kind, but you don't know what you will get from a mongrel no matter how good an individual he may be. There are some "scrub" pure bred however. Avoid them. Get a good type in the pure bred.

Some farmers have not learned the profit in producing their own meat supply. It is a very nice thing during certain seasons of the year, when it would be impossible to kill a beef steer for the family, to go into the field and select a nice, fat lamb for the table. Lambs are said to be one of the greatest delicacies in the best homes of the land, and this healthful and tasty food is in reach of every man who owns five acres of land. There should be a few sheep kept on every farm in the inter-mountain section.

Every farm home should have at least one good farm journal. No home can afford to be without it. There is no current literature today that is more wholesome and that is more free from sensationalisms. There is no "yellow journalism" in farm papers. They are just full of good, wholesome material that will make the farmers and his wife and children more efficient and more happy—that will give them a broader view and a greater appreciation of farm life—that will help them to see the beauties and come to love the finer freedom of the country.

Nearly all the farm papers are good, but one should choose a paper that applies to his particular conditions and locality. A western paper is not very well suited to the needs of an eastern farmers and vice-versa. The western farmer should subscribe to a western journal.

#### PREPARE FOR WET WEATHER.

With a great number of farmers the busy season is nearly over and some attention should be given to preparing for the winter weather. How about your corrals and farm yards. Don't they need some gravel to make them dry and comfortable, both for yourself and animals.

A good, hard dry yard is an indispensable feature on any farm. In fact we do not see how you can get along without it.

How about paths to yard and around the house. Do not wait until the stormy weather is here before you attend to these things.

Right now while the weather is good get busy and fix up for the wet weather. You will appreciate the efforts when snow and wet would prevent you from doing it. It is a good thing to be clean and there is satisfaction in knowing that you have prepared for winter weather.

#### AN APPRECIATION.

We are grateful for the many kind and encouraging words that have come to us during the past week about the improvements in the Utah Farmer.

With the new changes we hope to strengthen our friendship with old subscribers and to make many new friends. You will find the Utah Farmer actively engaged all the time, working for the advancement of agriculture in the intermountain country.

We invite your suggestion as to how we can best serve you. Is there some subject that we

can discuss or have an article written about, that will help you solve a problem you are working on.

There are many ways we can serve you. One that several of our subscribers have already taken advantage of is asking questions. Don't be afraid to ask them; when answering you it may interest hundreds of others who want to know the same thing.

#### WHY UTAH HONORS THE "GULL."

According to the Department of Agriculture the "gulls" are the original "white wings." They merit protection as scavengers because of their service in cleaning up dead fish and other garbage on the sea coast. The California gulls are extremely fond of mice and have done great service to the farmers in their warfare against these little rodents:

Speaking of the protection and honor that Utah gives to the gulls the bulletin says:

"That at least one community has not been unmindful of the substantial debt it owes the gull is attested in Salt Lake City, where stands a monument surmounted by a bronze figure of two gulls, erected by the people of that city 'in grateful remembrance' of the signal service rendered by these birds at a critical time in the history of the community. For three consecutive years—1848 1849, and 1850—black crickets by millions threatened to ruin the crops upon which depended the very lives of the settlers. Large flocks of gulls came to the rescue and devoured vast numbers of the destructive insects, until the fields were entirely freed from them. It is no wonder that the sentiment of the people of Utah as reflected through their laws affords gulls the fullest protection."

#### WHEN WILL THE FARMERS WAKE UP.

In order to co-operate more effectively with each other the Farmers should organize. They do not need to form a "trust," but an organization which will bring about better conditions for all concerned, a community of farmers banded together for the good of all. Intelligent co-operation, for the handling of those things which so vitally effect the agricultural interests. The banker, merchant, professional man and the skilled laborer all organize for their mutual good, why not the farmer. The need of such an organization is so apparent that for us to give added emphasis seems to be unnecessary.

Many organizations have been formed, but for some reason the farmers do not seem to "stick" together. Will some one tell us why? When will they wake up to the value of a good live organization?

The other day we learned of several farmers all living within a very few miles of each other who had hogs for sale. The local market was not very strong and none of them had enough to make a car load shipment. They all found sale for their hogs but they learned afterwards that they could have secured one cent a pound more if a car load had been got together and direct shipment made. No doubt some one pocketed this one cent a pound—and, by the way, a cent a pound is a big per cent of the total when the price is only seven cents. Is it any wonder that some farmers under these circumstances are not making money? Get together, co-operate with each other in your buying and selling, profit by the experience of others, both in producing your products and in selling them.



## Selling Potatoes

Whether to market potatoes from the field in the fall or store and hold them until spring is a question that confronts potato growers almost every year. Prof. C. L. Fitch, the potato expert, formerly of Colorado but now a member of the faculty at the Iowa agricultural college, believes that if the potato grower is to follow either one plan or the other year after year it is as profitable to sell from the field every year as to store every year.

But, by studying the crop reports and the markets, that potato growers will find it profitable to vary their practice—to sell from the field in some seasons and to hold in others. His advice is to determine each year from a close study of crops and markets which plan to follow. When the potato crop of the country is below normal he advises storing.

The government crop report for September indicated that the potato crop this year would be much short of 1912, and somewhat below normal. Moreover, the importation of potatoes from the principal foreign potato producing countries has been prohibited as a measure against the introduction of diseases; that will increase the demand for home-grown tubers along the Atlantic coast.

In deciding whether to store or sell, the cost of storage must be taken into consideration. It is estimated that storage in a permanent cellar, counting depreciation and interest on the investment, costs about 1 cent for each 100 pounds. The shrinkage of potatoes in storage between October and the next spring amounts to from 5 to 12 per cent, represented largely by loss of water from the tubers.

Will the increase in price between fall and spring cover the expense of storage? The answer to that question would of course, settle the whole matter. Statistics of spring and fall prices of potatoes at Chicago for 24 years show that the rise in price between fall and spring has more often been less than 20 cents a bushel than more than that figure. In four years out of 24 there was no rise in price; on the other hand, the increase has been known to be as much as 70 or 80 cents.

Marketing potatoes is different from marketing the cereal crops. Wheat or corn can be stored in a bin and a load may be removed at any time in the winter. More than that, if the grain is of good quality and is well housed it may be held for a year or several years. But with potatoes in this climate those which are not sold before freezing weather must be held until spring. Sometimes the market soars in the winter when potato cellars and pits are full, simply because the stored tubers cannot be got to market on account of the danger of freezing. Then in the spring whatever potatoes have been held through the winter must be disposed of at once before new ones come onto the market; for it is wholly impracticable to hold potatoes through the summer.

These things complicate the marketing of potatoes and make it a more difficult problem than that of marketing ordinary farm crops. Whether this is the year to sell "spuds" in the fall or store and hold until spring we do not attempt to say; we trust, however, that the points we have present-

ed here will help some grower to decide what course to pursue.

### OCTOBER IN UTAH.

Let selfishness and jangling discord stand aside. The heart of October is pouring forth its fulness—the fields are sweet as the breath of kine, and the hills are glorified with the radiance of myriad colors. Joy comes, grief goes, and the fight for right is worth while because it is toned and tempered with undying faith in the future of a great state. The autumnal sun in its daily journey looks down upon much terror and desolation in other parts of the world, but nowhere does it shine upon a land more blessed with the reward of honest endeavor than in these wonderful valleys of Utah.

The best of the essence of all the seasons is condensed in October as a delicious whole. The mornings have a fragrant touch of spring—the roses still nod encouragement to hearts that are tender with the old sweet song and the sunburst over the mountains carries shafts such as herald the daytime of spring. Into the crucible of October is poured the delicate perfume of the violet and the lasting fragrance of the rose transfixed by the first pressure of the frost king. It is the summit of life where all paths seem inviting. The birds are still with us in their exultant gayety—the feathered nest swings idly in the breeze, but the joyous notes of songsters tell stories of bountiful reaping.

As the sun approaches the noontide we feel the lazy lilt of summer in the blood—the warmth that is waning is not yet shorn of its energy. We drift through the haze of a summer's day and as the shadows grow longer we find ourselves at the door of fall. The high lights on the hills, the early coming of dusk and the cooler winds from the canyons remind us that time and change are on their relentless way. And then with the darkness comes a chill in the air that gives us fair warning of winter. Shouldering over the crest of the mountains we see an occasional snow cloud, the advance guard of a coverlet that will later clothe the fields in sleep and make us look well to our furnace fires. Four seasons have we in October and each has an inspiration all its own.

It's a great privilege to live in Utah in October—it's a great privilege every day in the year. Let us help to make that living better—Ogden Examiner.

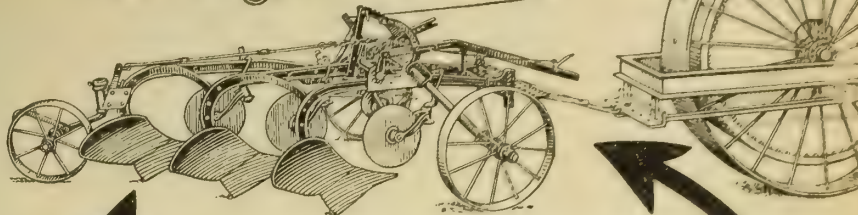
### CARE OF OUR MACHINERY

Another season's work on the land is nearing completion, and the tools we have been using should be given careful attention. They represent a large cash outlay and every year their life can be prolonged is just so much added to the profits of the farm. For instance, suppose that a binder costing \$130 with ordinary usage will last ten years, making a cost of \$13 per year besides cost of repairs, which mount up as the binder becomes worn. Now, if that same binder had been carefully housed during the many months of each year it must remain idle, its life would have been lengthened by nearly one-half, or its life would have been fifteen years instead of ten. Suppose that a good cover over it added two years to its life, making twelve years; this would give us some \$10.83 running expenses per year or a difference of \$2.17 per year. As the

# MOLINE

## POWER LIFT GANG

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Here is an economical outfit for the average sized farm. It is simple, practical, easy to operate and may be hitched to any type of tractor. This is the first light tractor gang to meet all requirements. Note the following special features and then write us or call on your nearest dealer for prices. Before buying a light tractor plow be sure to examine the

## Moline Power Lift Gang

**Set-Over Hitch**—Has a wide range of adjustment to right or left and may be hitched to any tractor; semi-rigid so the plow may be backed up even when in deepest furrow

**Construction**—Beams are extra heavy, same as used on our heavy type of engine gang plows. Strong arch braces, rigidly bolted between beams, extend downward to reinforce beams where strains are most severe.

Rear portion of beams is free from braces or bolts, providing ample adjustment for coulters, jointers or weed hooks.

Beams have unusually high clearance—won't gather trash.

**Self-Leveling**—Front furrow wheel is controlled by a new type of adjusting mechanism which makes the plow self-leveling from any adjustment of the wheels. When released plows strike the ground point first.

**Power Lift**—Operated by pulling a single cord which engages a friction clutch of the type used almost universally on automobiles, eliminating objectionable

features of the usual positive clutch. The power lift device operates all three wheels and is simple, quick in operation and adjusts the plows for depth, which may be changed while the plow is in operation by simply pulling the cord. These are new and exclusive features of the Moline Power Lift Gang.

**Rear Wheel**—Raised by power lift, is adjustable, locks automatically for plowing or backing, casters automatically for turning and transporting.

**Bottoms**—Furnished with 10, 12 and 14-inch bottoms in a variety of shapes to meet any soil condition.

**Quick Detachable Shares**—The Moline Power Lift Gang is equipped with Moline Quick Detachable Shares. To take the share off simply loosen one nut, unhook draw-rod and remove share. A great labor saver and easier and stronger than any other. Shares are made of Flying Dutchman Acme Steel and are warranted against breakage.

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above applies only to one of our many implements, how long would it take to save enough money to build a good shed.

It would not be so bad if such tools were in daily use, but most of our expensive machinery is in actual operation only a few weeks each year. Take, for instance, our binders, mowers, etc., not including our higher priced implements, such as threshers and engines; all are used only a small percentage of each year. The long period of idleness, with the variations of temperature, together with storms, does far more damage to the machinery than their actual work does. All machinery should be looked over carefully before using. When housing is the best time for this look them over again before they are placed in operation. Loose bolts cause more breakages on farm machinery than any other cause. Let a bolt get the least bit loose on a casting and before long you will have a broken casting. A binder carefully gone over every day it is in use will run much smoother, causing less draft on the team and at the same time will add several years to its life. On several occasions where a man was running an implement with one bolt lost on a casting which would cost several dollars to replace, simply because the operator had not taken the necessary time to go over his machine before starting in the morning. Now any person must see that this is poor economy. In order to give him more time to operate the machine he lets a

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casting representing a large part of the day's earnings be in danger of being broken.

Lack of oil has caused many a fairly new machine to be thrown in the fence corner. Oil is surely cheaper than new tools and the time required to apply it is well spent. Wherever there is metal in motion against other metal add oil as this forms a film over both metals on which the friction comes. The more we can reduce friction the longer the life of the implement and the less the cost of operation. Every man on the farm should study the machinery he uses and become familiar with every working part on it. By doing so he will be able to get much more work out of it at less expense and with less labor than he otherwise would.—Successful Farming.



# THE HOME

## POTATO RECIPES. Simple Directions for Preparing This Wholesome Vegetable in Many Ways.

The following recipes for potatoes, prepared by the Office of Home Economics for club work by the department, show a few of the many users of the wholesome potato:

**Potato Soup.**  
3 potatoes, of medium size.  
4 cups skim milk.  
1 small onion.  
4 tablespoons butter.  
2 tablespoons flour.  
1½ teaspoons salt.  
¼ teaspoon celery salt, or  
2 tablespoons celery, cut in small pieces.

½ teaspoon chopped parsley.  
Little cayenne pepper or paprika.  
Boil the potatoes and when soft rub them through a sieve. Slice the onion and scald this and the celery with the milk. Take out the onion and add the milk slowly to the potatoes. Melt two tablespoons butter, into which mix the dry ingredients, and stir into the boiling soup. Boil one minute; strain, add the remainder of the butter and sprinkle with the parsley when ready to serve. The parsley improves the looks and adds a little to the flavor, but may be omitted if this is more convenient.

**Boiled Potatoes.**  
Select potatoes of uniform size. Wash, pare, and drop at once into cold water to prevent them becoming discolored. Cook in boiling salted water until soft, but not until broken. For six medium-sized potatoes allow one tablespoon salt and boiling water

enough to cover. When the potatoes are done, drain off the water, place the uncovered kettle on the back of the stove, and let them steam until serving time.

When potatoes are boiled with their jackets on, they should be washed and a narrow band of skin cut from the center. This tends to let the steam escape more rapidly and renders the potato more mealy and palatable. It also makes it easier to remove the skin. Potatoes boiled in this way are palatable for several hours if kept hot on the back of the stove.

**Baked Potatoes.**  
Select smooth, medium-sized potatoes. Wash, using a vegetable brush. Bake in a hot oven for about 45 minutes, or until soft. Remove from the oven, break the skin slightly to let the steam escape, and serve at once. When potatoes are baked properly they are commonly said to be especially wholesome. However, they are better cooked in boiling water than baked in a slow oven.

**Stuffed Potatoes.**  
A nice way to vary baked potatoes is to cut a slice from the top of each and scrape out the inside. Mash, season with salt, pepper, chopped parsley (if liked), and butter, and heat in a little hot milk; add two well-beaten whites of eggs. Refill the skins, sprinkle with grated cheese, and bake in a hot oven about six minutes.

**Mashed Potatoes.**  
Force five hot boiled potatoes through a potato ricer or a colander (coarse strainer). Add two tablespoons of butter, one teaspoon salt, a little pepper, and one-third cup of hot milk; beat with a fork until creamy. Reheat and serve in a hot vegetable dish. This quantity is sufficient for a family of four.

**Riced Potatoes.**  
Force hot boiled potatoes through a potato ricer or a coarse strainer in to a hot dish in which they are to be served. Mashed and riced potatoes may be browned by placing the dish in the oven for a few minutes.

**Scalloped Potatoes.**  
Wash and pare potatoes; let them soak for a half hour; and cut in one-fourth inch slices. Butter a baking dish, put in a layer of the sliced potatoes, sprinkle with salt and pepper, dredge with flour, and dot over with one-half tablespoon of butter. (A little grated cheese may be sprinkled over each layer if desired.) Repeat until the baking dish is nearly filled, then cover with hot milk. Bake 1½ hours in a moderate oven, or place on the back of the stove and cook slowly.

**Saratoga Chips.**  
Wash and pare the potatoes. Cut in thin slices (using vegetable slicer preferably) and drop at once into cold water. Let soak two hours, changing water two or three times; drain, drop into boiling water, and boil one or two minutes. Dip out with skimmer and plunge into cold water again. Take from the water, dry between towels, and fry in deep fat until light brown. Drain on brown paper and sprinkle with salt. Plunging the potatoes into hot water to swell and boiling them for a minute or two causes the starch particles to swell and become set. They will, therefore, absorb very little fat, and are

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more crisp and palatable than when dropped at once into deep fat.

### Creamed Potatoes.

There are several different ways in which creamed potatoes may be prepared. (1) Freshly boiled or cold boiled potatoes may be cut into small cubes and served heated in cream sauce. (2) Wash, pare, and cut potatoes into small cubes. Put into frying pan with a few slices of onion cut up very fine, and parboil 10 minutes. Pour off water. Add one tablespoon butter, seasoning of salt and pepper, and milk enough to cover. Cook for 15 or 20 minutes, or until the potatoes are well done and the sauce thick and creamy. It is necessary to stir the potatoes frequently to prevent sticking. The starch in the potatoes thickens the sauce.

### French Fried Potatoes.

Wash, pare, and cut into eighths lengthwise. Soak in cold water one hour; drain, and dry between towels. Fry in deep fat, which must not be too hot. Drain on brown paper and sprinkle with salt.

### Shoestring Potatoes.

Potatoes cut in long, narrow strips and prepared by the above recipe are called Julienne or shoestring potatoes.

### Panned Potatoes.

Cut cold boiled potatoes into quarter-inch slices; dredge lightly with flour and fry in pan with a little butter. When light brown, heap on side of pan; let stand a few minutes, then loosen with a knife and turn out on a platter in much the same way that an omelet is taken out. Sprinkle with salt and serve at once.

### Hashed Brown Potatoes.

Cut cold boiled potatoes into small pieces (2 cupfuls), season with salt and pepper, cook 3 minutes in one-third cup bacon drippings, stirring constantly. Let stand a few seconds to brown underneath; fold like an omelet, and serve on a hot platter.

### Pan Fried or Sautéed Potatoes.

Slice cold boiled potatoes in quarter-inch pieces; season with salt and pepper, and brown on both sides in well-greased frying pan.

### Potato Salad.

Cut cold boiled potatoes into half-inch cubes and season with salt and pepper, or a few drops of onion juice if desired. Heap in a mound in a salad dish, garnish around edge with a circle of lettuce and hard-boiled eggs, and pour over all a French dressing made as follows:  
½ teaspoon salt.  
1-8 teaspoon cayenne.  
2 tablespoons vinegar.  
4 tablespoons olive oil.  
Little onion juice.

Mix the ingredients in the order named, and stir until well mixed. For variety add to two cupfuls of potato one-half cupful of cold beet dice (cooked) and two tablespoons chopped

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parsley or cheese; carrots and a little chopped celery leaf may be used if preferred.

Many cooked or canned left-over vegetables may be attractively used for salads.





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### ROUGH.

He—So your dear count was wounded?

She—Yes, but his picture doesn't show it.

He—That's a front view.

## SOUPS AT THE FARM TABLE

Mary Johnson.

One of my friends said, "I spent all of my young life on the farm, and married a farmer, staying on the farm until middle age; but I never saw a plate of really good soup on a farm table." And I recalled the fact that, country born and bred as I was, myself, I never knew how to make soup until I left the farm an elderly woman.

It is a great mistake to fail to make soup, as it is a very welcome dish, liked by almost everybody appetizing, and so many odds and ends can be used in making it, that it certainly is economical. Few housewives can afford to waste the material that is at hand, and to be used in no other way. In the meat markets, you will find the bones closely trimmed and they are eagerly bought for the family table, and many appetizing dishes are made from them, in the way of using seasonings. Where one raises his own beef and mutton, veal, and even pork, to say nothing of chickens, there is so much good material at hand for the foundation of soup that it does seem worse than waste not to use them. Every scrap of bone, or tough piece of meat, odds and ends of the trimmings, should be put into a soup kettle and slowly simmered until perfectly done, then strained, and the liquor kept for "stock," from which to make soup or gravies, or flavoring. Two kinds of meat make a better flavored soup than one. Beef and mutton, turkey-bones, meat trimmings, bones from fresh pork, chicken bones, scraps of meat, and other remnants; the meat should be chopped fine and the bones broken, and all stewed until the meat is "in rags." These meats should be simmered—not boiled,—then the liquor strained off and set away to cool, skimmed of the fat, which should be saved with whatever vegetables are liked the next day. Any good cook book will give clear instructions for making soup, and once having become used to having it, you won't like to be without it. A good, thick soup is a meal of itself.

### BOOZE FIGHTING.

An interesting suggestion taken from the "Illinois Steel Company Safety Bulletin," July, 1915.

For the married man who cannot get along without drinks, the following is suggested as a means of freedom from bondage to the saloons:

Start a saloon in your own house. Be the only customer (you'll have no license to pay). Go to your wife and give her two dollars to buy a gallon of whiskey, and remember there are sixty-nine drinks in a gallon. Buy your drinks from no one but your wife, and by the time the first gallon is gone she will have eight dollars to put into the bank and two dollars to start business again. Should you live ten years and continue to buy booze from her, and then die with snakes in your boots, she will have enough money to bury you decently, educate your children, buy a house and lot, marry a decent man, and quit thinking about you entirely.—The Harvester World, October, 1915.

Fault finding is one of the easiest possible jobs and it is no sign of superiority or particular good sense on the part of the fault finder.

## FIRST AID TO THE POISONED.

From the Idaho State Board of Health.

In poisoning, as the lawyers would say, time is the essence of the contract. Action should be quick. It is much better to work with jumped-up things than to let the opportunity go by while trying to get just the right thing.

The first thing to do is to cause vomiting. While somebody is running for mustard and warm water, the patient should produce vomiting by tickling his throat with his finger, or a feather, or anything right at hand. As soon as the mustard and warm water arrive, a tablespoonful of the mustard should be dissolved in a glassful of warm water and the mixture gulped down. Then run a finger into the throat. If this fails, give two tablespoonfuls of syrup of ipecac.

Unless vomiting has been free, and in the case of powerful poisons regardless of vomiting, the stomach must be washed out. If there is a fountain syringe at hand, it should be filled with warm water, the tip removed, and the tube swallowed. When two-thirds of the water has run out of the bag it should be dropped to a point lower than the patient's belt and the stomach siphoned out.

If the patient will not vomit, a hypodermic of apomorphine tablets will bring results. As apomorphine tablets may be had in the first-aid case sometimes, it is advisable to give it before the physician arrives. There should be no hesitation in doing this unless vomiting has been satisfactory. The dose is one tablet.

In treating poisoning, the first step is to produce vomiting; the second, to give an antidote.

Some of the more common poisons and their antidotes are:

Alcohol: Coffee in large quantities by the stomach or rectum.

Chloroform taken internally: Large doses of bicarbonate of soda in water.

Mushrooms: Twenty drops of belladonna; repeated in half an hour if necessary.

Opium: Tincture of belladonna, 20 drops; repeat in half an hour if necessary; coffee in large quantities; give no alcohol, either as whiskey, wine or spirits.

Arsenic: Hot, greasy water; lime (scraped from the wall if nee dbe); toothpowder; sweet oil; castor oil; limewater; raw eggs, tincture of iron.

Strychnine: Tannic acid; tea; bromide of soda.

Phosphorus: Sulphate of copper, 2 grains every five minutes; French turpentine; magnesia freely.

Acids: Alkalis, soda, soap, chalk crayons, lime, toothpowder, eggs, milk, oil.

Oxalic acid: Lime from the walls, toothpowder, crayons. Do not use soap.

Carbolic acid: Large doses of Epsom salts: Glauber salts, eggs, whisky.

Corrosive sublimate: Eggs, milk or mucilage in abundance.

Caustic potash: Vinegar, lemon juice, hard cider, eggs.

Lead: Epsom salts.

Lye: Vinegar, lemon juice, milk, oil.

Iodine: Starch, white of eggs.

Matches: Epsom salts, French turpentine.

The third step is to treat so much of the effect of the poison as has not

been washed out or neutralized. Some part of what are called antidotes is better called physiological opposites and, therefore, might be classed in after treatment. In the main, after treatment consists in stimulation and protection against shock. In a general way, symptoms should be met. For example, if the body is cold, external heat and stimulants internally are called for. If the patient is disposed to sleep, he must be kept awake.

### HE NEVER DID IT BEFORE.

A Chicago salesman bought the only remaining sleeping car space. An elderly lady next him in line in front of the ticket window burst into tears.

"I must have a berth in that train," she exclaimed, "it's a matter of life or death!"

The salesman gallantly sold his reservation to her. Next morning his wife was astonished to receive the following telegram from her husband:

"Will not arrive until tomorrow. Gave berth to an old lady last night."

### BAD HABITS.

The grasshopper chews tobacco;

The quail gets out his pipe;

The fishhawk is so awful poor

He has to hunt a "snipe."

The rooster has his cocktail;

The orchard gets plum full;

The onion squanders every scent,

And the radish has a pull.

### IN DANGER.

"I have often stood in a slaughter house," observed the fleshy man from Chicago, "while the butchers were killing hogs on all sides of me."

"Oh," exclaimed the tender-hearted but tactless New Haven girl, "weren't you dreadfully afraid?"—Exchange.

## Your Farm Equipment

should include "Never-Rip" work clothes.

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## NEVER-RIP

—1200 farmers and working-men ask for them by name every day—

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## LIVE STOCK

### CARE OF SMALL PIGS.

Attention to Details Necessary to Develop Large, Healthy Litter—Feeding Ration.

The sow, in order to produce a large, healthy litter, should be in the best possible breeding condition. After she has been bred, careful feeding and management are necessary to develop successfully the litter she is to produce. It is well to keep a record of the date on which the sow was bred, in order to know approximately when the youngsters are about to arrive. The gestation period of pigs is 112 to 115 days. It is good policy to be at hand in case the sow needs help, but she need not be helped if she is getting along well.

#### What to Do When the Pigs Arrive.

When the pigs are born during warm weather they are less liable to become chilled and will generally find their way to the teats unaided. In extremely cold weather the pigs will be in danger of being chilled unless the hog house is heated. To remedy this, place a few heated bricks in the bottom of a basket or small box, cover them with chaff or straw, and put a cloth over the top to keep in the heat; unless the sow objects too seriously the pigs may be rubbed dry with a soft cloth and placed in the receptacle as fast as they arrive. If any of the little pigs appear to be lifeless when they are born, first see that all mucus is removed from the nose, then give the pig a few gentle slaps on the side with the hand. This will start the pig breathing if there is any life in the body. Give it a suck of the sow's milk and place it in the receptacle described. The pigs will not suffer if they do not suck for a few minutes after farrowing.

#### Cut Out the Black Teeth.

Before placing the pigs with the sow cut out the eight small tusk-like teeth. There are four of these on each jaw in the rear of the mouth. These teeth are very sharp, and if left in the pig's mouth they will likely cause tearing of the sow's udder, and the little pigs cut one another's mouths while fighting for a teat. These teeth can be removed with bone forceps, wire nippers, or a knife. Never pull out the teeth. Always cut or break them off. After this operation place the pigs with the sow, care being taken that each one gets to a teat.

When the afterbirth is passed it should be removed from the pen at once and buried or burned. There is good reason to believe that eating the afterbirth is often the beginning of the habit of eating pigs.

#### The Sow's Feed.

Great care must be taken to feed the sow properly. If she is not being properly fed the little pigs will show it. If the pigs follow the sow around very much and pull at her teats, it is a good sign that she is not giving enough milk, and more feed should be given to stimulate milk flow. When a sow is overfed, causing a heavy milk flow, scouring is generally produced in the pigs. If this happens, cut down the sow's feed immediately. Give the sow 15 to 20 grains of sulphate of iron (copperas) in her slop morning and evening, and if necessary increase the dose until results have been obtained.

#### Exercise is Essential.

It is very necessary that the little

pigs have plenty of exercise and all the sunlight that can be given them. If they do not get exercise, they will get fat and lazy and the usual result is the "thumps." This is caused by the fat getting so thick around the heart and lungs that the pigs find it difficult to breathe. They will be noticed heaving at the flank and gasping for breath. The best way to prevent this is to avoid overfeeding and make the young pigs take plenty of exercise.

#### Weaning.

When the pigs are about five weeks old, they will begin to taste some of their mother's feed. Do not be in a hurry to wean them. Eight weeks is young enough to wean them, if there is skim milk for them. Of course the size and development has a great deal to do with their weaning age. If skim milk is not obtainable, it is better to let the pigs nurse the sow until ten weeks old.

#### The Weaning Ration.

Skim milk and corn, or skim milk and shorts, fed in the proportion of 3 to 1, make an excellent ration for weanlings. If skim milk is not available, a mixture of 5 parts corn meal, 4 parts middlings, and 1 part tankage, fed as a thin slop, is very good. Good succulent pasture is always beneficial. It will aid wonderfully in putting growth on the young pigs, and the grain expense will be lessened. After a litter of pigs has been weaned and are eating well, the most difficult part of their care is over. The feeding and management from then on will depend much upon whether they are to be kept for breeding or fattened for the market.

### CLEAN UP THE PIG PENS.

By J. B. Gingerly Missouri Agricultural College.

In addition to cholera hogs are subject to many common diseases which may cause the death of the affected animal or interfere greatly with its growth or development. The natural habits of the hog together with the unsanitary conditions that are so often forced upon it are in most cases the cause of the common ailments. I am inclined to think these ailments are not so much due to the natural habits of the hog as to the unhealthy conditions provided by its owner, conditions that could easily be avoided with profit to the swine raiser. As dirty as a pig is a very common expression. But the pig will not be as dirty as his reputation would have him if the swine raisers do their duty in providing proper quarters and clean and comfortable. There is no animal that responds more readily to proper care.

Neglect to supply comfortable sanitary sleeping quarters, feeding yards and proper rations is responsible to a great extent for the common ailments to which swine are subject. These ailments in turn predispose the affected animals to the infectious diseases such as hog cholera by lowering their resistance to the infection that may by accident be brought to the farm. But let us consider some of these common ailments. Strongylasis or worm infestation is the most common swine infestation, and this to a great extent is avoidable. There are a great many kinds of worms that infest hogs, but the most common

ones that infest the intestinal tract are the long round worm and the thorn headed worm.

The long, round worm is found most frequently in the small intestines, but also may be found in the stomach. They sometimes even penetrate the oesophagus. In a very few cases they pass into the gall duct, the gall bladder and liver from the intestines. They sometimes are present in the small intestines in such numbers as to entirely fill the lumen of the intestines and obstruct the passage of the ingesta or food. Pigs affected in this manner if not relieved by medical treatment frequently die or become badly stunted before they get rid of the worms. The irritation of the alimentary tract caused by these worms give favorable point of entry for the germs of hog cholera if as mentioned above infectious materials should by accident be brought onto the farm where they can be picked up by the hogs. Hence the importance of keeping the hogs free from these most common of the internal hog parasites.

The thorn headed worm is found in the small intestines attached to the walls of the intestines by burrowing into the wall of the intestines with its head. The following vermifuges have been found useful for relieving troubles of this kind: Santonin, six grains; calomel four grains for each 100 pounds of live weight, or turpentine may be given, two to four teaspoonfuls according to the size of the hog. Three pounds salt, three pounds sal soda, three pounds copperas, three pounds glauher salts, one pound sulphur, four pounds charcoal. This mixture should be kept in a trough under a shed where it is dry to avoid waste by rain.

Another trouble that is perhaps as common as worms and is much easier diagnosed is lice. Lice usually deposit the eggs or nits on the hairs in the folds of the skin just back of the ears or on the under and posterior side of the ham or behind the forelegs in large numbers. They may produce marked emaciation or unthrifty condition of animals. Lice can be eradicated by the use of crude oil, kerosene emulsion or some of the good dips. Crude oil can be applied in a number of ways, as a dip, by means of rubbing a post, as a spray. In a wallow it is used undiluted. Kerosene emulsion is made as follows: Kerosene two gallons, common soap eight ounces, water one gallon. Dissolve the soap in boiling water, add this solution boiling hot to the kerosene and stir for ten minutes. Use a 5 per cent solution of this or one part of this emulsion to nine parts water. It can be used as a dip or a spray. The other dip should be used as recommended by the producer of the dip.

Indigestion is due to some digestive disturbance and in a great many cases can be overcome to a certain extent by regulating the feeding, giving proper balanced rations and keeping the animal free from worms. Do not make sudden changes of food, but change very gradually. Do not let hogs eat carcasses of other animals, as the change of feed and the over feed is quite likely to cause indigestion and more serious trouble may follow.

Pneumonia or lung fever is an inflammation of the lungs and is produced by exposure. Other things might cause it, but if hogs are properly housed and supplied with dry

## Percheron Stallion

An unusual opportunity to purchase a good stallion. Foaled June 1913. Utah bred. Sire imported Damocles. Very large and finely developed. Direct all inquiries to B. T., Utah Farmer, Lehi, Utah.

bedding and given plenty of fresh air without draft there is not much danger from pneumonia. Do not allow hogs to sleep around the manure piles, straw piles or alfalfa stalks for such beds if not already damp are liable to become so in a short time.

I was once called to a farm to investigate trouble in hogs and the owner informed me that he had an extra good warm place for his hogs around one of his alfalfa ricks between the stack and the side of his alfalfa shed. Upon investigation I found a nice warm place, in fact so warm that as soon as the pig got out into the wind or snow it immediately showed signs of chilling. On digging down into the old bedding I found the decaying wet alfalfa so hot that I could hardly hold my hand in the bedding. I advised complete change of sleeping quarters and a fair per cent of the hogs recovered in good shape. One cannot be too careful about sleeping quarters to ward off pneumonia.

Any of these common ailments have a tendency to weaken the constitution of the hog and lessen its resistance to infectious diseases, so any animal suffering from any of these maladies is more susceptible to any of the infectious diseases. As cholera is one of our most infectious diseases a hog suffering from any of the common ailments is more susceptible to hog cholera. None of these common ailments can cause hog cholera, but by lowering the hog's resistance they predispose hog cholera and thus the hog takes the disease when if in a healthy condition it might otherwise have resisted the infection.

### BEEF CATTLE.

Beef cattle have decreased in numbers very greatly during the past ten years. The aggregate value, however, shows an increase. The less number is worth and brings more money than the larger number, which proves conclusively that with the present conditions that large numbers do not necessarily bring more money. While less pounds of beef are produced now, the indications are that the 36,000,000 of beef cattle in the country weigh more in pounds than the total weight of the 44,000,000 head in the country ten years ago. This should be a strong plea for improved beef cattle. The need of the best pure bred sire is the slogan that will help solve the beef question. Better cows mean fewer of them to supply the urgent demand for beef, milk, butter and cheese. For three decades the proportion of dairy cows compared with the population has remained about the same. During the last ten years, however, there has been a decrease. Not as many cows are needed, for the average

(Continued on page thirteen)



# ORCHARD AND GARDEN

## STORING PUMPKINS FOR WINTER

About eighty-five per cent of a pumpkin is water, yet they are a valuable addition to the grain ration for stock feeding because they are a supplement to the general ration, furnishing that succulent, vegetable content that is so necessary in the heavy feeding of grain.

The usual season of feeding pumpkins is at a time when there is already considerable green stuff to be had in connection with the grain fed; therefore the extension of time for feeding the pumpkin until other green matter is gone is very important, and the feeding time may be extended at least eight weeks from the usual feeding season if care is used.

Locations for storing pumpkin must be dry, as dampness like that of the ordinary cellar soon starts mold and decay, as that in most cases it is advisable to store above ground.

The storing should be done at a place where the extremes of temperature as close together as possible, well toward the center of an ordinary barn being a very suitable place in most cases.

Only ripe pumpkins should be stored, the green ones being fed immediately. The vine should be broken from the stem, and never the stem from the pumpkin, for when broken off the pumpkin the juice which oozes out, ferments and sets up decay. Wagons which are to be used to haul them to the place of storage should have at least a foot of straw in the bottom and each pumpkin should be handled with care, for cuts made by careless handling often start decay.

Frost should never touch the pumpkin in the field. Probably the most rapid way of handling the pumpkins is to pitch them, we have often transferred them from the wagon to the storage pile, a distance of thirty or forty feet, using three or four hands and pitching from one to another.

Storage should be made on wood or concrete floor with at least a foot of straw under them, and they should not be piled over three feet deep, using care when piling them to prevent the stems from damaging the others they come into contact with.

As a rule they need no covering until after they are sorted once, which should be not more than fifteen days after they are stored, for they should never be allowed to decay to the point where they will become soft enough to damage those that come in contact with them.

As soon as there is danger of freezing they should be well covered with hay or straw.

Two points should be kept in mind, to prevent their freezing as long as possible, and to keep them frozen after they once freeze, for when a frozen pumpkin thaws out it is as flat and soggy as a mop, though their feeding value, for hogs at least, is not impaired by the freezing and thawing.

When the weather is extremely cold they are easily thawed by throwing them in an open well, a spring, or any water that is somewhat above the freezing temperature.

We rarely run out of feeding pumpkins before January first to fifteenth,

and all through November and December they are valuable to feed with grain as an appetizer and regulator, especially to the hog, be it little pig, shoat, fat hog, or brood sow; however the little pigs will overfeed on them if let run to them at their will.

We are confident that you will find your pumpkin crop twice as valuable if you will arrange to store them and lengthen their feeding season.—O. R. A., Ind.

## CARE OF TOOLS.

Some general directions for the care and preservation of tools will not be out of place, as even the best tools become useless if they are not cared for. The following hints will no doubt be appreciated by every mechanic who desires to make his tools last as long as possible, and who always wishes to have them in good condition:

The wooden parts of tools, such as stocks of planes and handles of chisels, are often made to have a nice appearance by French polishing, but this adds nothing to their durability. A much better plan is to let them soak in linseed oil for a week and then rub them with a cloth for a few minutes each day, for a week or two. This produces a beautiful surface and exerts a salidifying and preservative action on the wood.

## A Hint Worth Remembering.

All steel articles can be perfectly preserved from rust, by putting a lump of freshly-burned lime in the drawer or case in which they are kept. If the things are to be moved as a gun in its case put the lime in a muslin bag.

To keep tools from rusting, take one-half ounce of camphor, dissolve in one pound of melted lard; take off scum and mix in as much fine black lead (graphite) as will give it an iron color. Clean tools and smear with this mixture. After twenty-four hours rub clean with a soft linen cloth.

## To Remove Dirt and Rust.

To remove rust, cover the metal with sweet oil, well rubbed in and allow to stand for forty-eight hours; smear with oil applied with a piece of cotton wool after rubbing the steel. Then rub with unslacked lime reduced to a fine powder.

Immerse the article to be cleaned for a few minutes, until all the dirt and rust are taken off, in a strong solution of potassium cyanide, say about one-half ounce in a wine glass of water; take it out and clean with a tooth brush with a paste compound of potassium cyanide, castile soap, whitening and water.

## NOT ROOM FOR BOTH.

There's not room for the weed in your garden,

And the flowering blossom, too;  
You can't have the noxious nettle,  
And the violet's lovely blue.  
For the weed will choke the blossom,  
And not all the sun and rain  
Will ever restore its beauty,  
Or bring back the gloom again.

You can't have the smile of sunshine,  
And the dark frown on the face;  
If you have the look forbidding,

# Reliable Farm Bargains

Two Acres on 9th East and 16th South at \$500.00 per Acre.  
Very easy terms.

40 Acres near Tremonton, in the Great Bear River Valley. Full water right. In a high state of cultivation. Near good schools, railroads, churches, social conditions. In fact, a good place to make a home. Go with us and see this ground while they are harvesting the crops. Price \$115 per acre, with 10 years to pay.

100 Acres right near Garland. This is some of the very best land in the Bear River Valley. Water right from Bear River Canal. All under cultivation. This property must be sacrificed at once for \$100.00 per acre. One-fourth down, terms on balance.

6½ Acres on 15th South and 3rd East. 7-room house, large chicken houses and other outbuildings, flowing well. This is one of the most ideal chicken ranches to be found anywhere. \$3100.00, one-tenth down, one-tenth each year.

We trade City Homes for Farms.

# Kimball & Richards

56-58 Main Street.

"Land Merchants"

Salt Lake City, Utah.

## BEEF CATTLE.

(Continued from page twelve)

You will lose the smile's bright  
grace.  
And it is better to have the sunshine,  
And the welcome in the eye,  
Than the frown that is back and chill-  
ing  
And the clouds within the sky.

There's not room for the light and  
gladness,  
And the sweetness in the life,  
As well as the dark and loveless,  
And a heart that is set on strife.  
And 'tis best to be sweet and gentle,  
To be pure and good and kind,  
And to keep as a lasting treasure  
A sweet and loving mind.

—Chatterbox.

Hoe all grass and weeds away from  
the trunks of trees. This will destroy  
a winter home for mice.

Prune grape vines as soon as the  
leaves drop. They should be laid  
down before the ground freezes solid.

Potatoes should be stored in a cool  
cellar. A temperature of about 35  
is good. If they are kept warm enough  
to sprout badly, a loss of from ten to  
thirty bushels per acre in yielding  
power may result.

Good implements have much to do  
in making farming profitable. It is  
impossible to estimate the advantages  
the agriculturist derives from this  
sources. Antiquated implements and  
inefficient devices employed in farm  
labor are a source of wasted energy  
for man and beast. The cost of im-  
proved modern implements is not to  
be compared with their earning  
capacity.

age dairy cow at the present time  
is a better producer than her ances-  
try. While the increase of dairy cat-  
tle has been during the last decade,  
nineteen per cent, the population has  
increased twenty-two per cent, bet-  
ter and more cows are imperative  
if we are not to have a shortage  
in dairy and beef products.

It seems probable to me that there  
are a good many hundred university  
graduates in this country every year  
who would be better off if they had  
shaped their studies with a view to  
agricultural industry and taken their  
diploma straight to the farm.

There is not and never will be an  
oversupply of educated farmers.

At the same time, the man with a  
university education, supplemented  
by just such practical instruction as  
he would feel essential to any other  
occupation, is certain of success on  
the farm in proportion to his ability  
and industry.

I do not think of any other occu-  
pation of which these sweeping as-  
sertions can be made. I do not know  
of any in which it is more possible  
to continue, in connection with the  
main business of earning a living,  
that enrichment and enlargement of  
the mind which is the best gift of  
university life and its proper, though  
seldom realized, continuation after  
the university has been left behind.

Except for those who have made  
the acquisition of wealth and power  
their definite aim in life, I think  
the farm offers advantages that are  
superior to those of business or the  
professions.—James J. Hill.



## POULTRY

### THERE'S MUCH IN THE CARE Michael K. Boyer.

No matter how good the stock may be, if they have not the proper care they will be no better than mongrels. Poultry on the farm, as a rule, receives indifferent treatment.

What does "Care" mean? It means a close watch on the business, provides every comfort, prevents disease by keeping the premises perfectly clean, never overcrowds and keeps the fowls busy, sorts out the drones and gives the workers better attention. In short, care means in using business principles in every scene of the word.

The farmer is not giving proper care when he allows his fowls to roost on trees, in wagon sheds, or on board fences; the proper care is not given if the appetites and conditions of the fowls are not studied.

System and regularity play an important part in care; economy in labor, the saving of steps, the saving of muscle, the saving of time—all are important. Shiftlessness causes dear experience. There is a profit in anything we take care of. Success is according to management. Profits depend upon the quality and quantity of brain work put in the enterprise.

If a man performs his work in a mechanical way, he will not be apt to do it well. There are too many who go by "luck." They do not stop to think. They do not take notice of the little matters. They are always hurrying to get done. Too many assume too much work.

Dr. Casey says quality makes prices—but it costs considerable labor and brain to make quality. Good management curtails expense. Successful poultrymen use good common sense methods; some others but little method; and, alas, some no method at all. Hard luck is generally brought about by mismanagement. Disorder creates disgust. Study and care—and not luck and big talk—are elements of success.

To quote Judge Brown: There are too many poultrymen who let their enthusiasm go down as the mercury in the thermometer goes up. The men who make marked success in poultry raising are those who never flag in their attention—those who know that the increased labor and close attention hot weather brings must be religiously observed; that is a critical time to let neglect creep in. The same precaution must be used when cold weather is here. It is the man or woman behind the hen, rather than the breed, that brings success.

Scrubs treatment will bring about scrub results. The best paying breed is the one that is best cared for. Zeal in the prosecution of the work should be the characteristic of every poultry breeder.

In conclusion, it must not be forgotten that success depends upon management. Business attention given to a flock of properly housed hens would be a revelation to many, especially farmers.

A poultry writer recommends that those living near hotels should arrange for the garbage, stating that in it there is such a variety of food that will be of untold value to hens. The

fact is that anything the average restaurant will refuse to jumble together for their customers is questionable food for fowls or hogs. In summer this refuse, when removed once a day, is unspeakably foul, and the one who removes or handles it needs the nose of a scavenger. Fermented and decaying refuse from such places is dangerous, even to handle. In this "garbage" are often found pickles, sour cabbage, rotten potatoes, tainted meat and other stuff—even including coffee grounds—fit only for a manure pile. We cannot be too careful in what we feed our stock. Fowls should have perfectly sound food, or they will not enjoy perfectly sound health.

The poultryman who follows a practical system does not complain of the work. System is a great labor saver in all occupations, and especially so in raising poultry. The man who has no regular method causes himself extra and unnecessary work, and it always "seems to pile up on him at an inopportune time."

The market poulturer finds uniformity one of the greatest characteristics in pure bred poultry. There is more attraction in the coop of chickens all alike in size and color, than in a promiscuous lot, and they sell more readily. But we place no stock in the theory that the pure breeds give us a better quality of flesh; that is a matter of food and care. A mongrel properly fed will have better flavored meat than a pure bred improperly fed.

When fowls crowd at night, which is the case when the number quartered is greater than the capacity of the house, they sweat. This sweating causes the feathers to rot at the base giving them the very appearance of molting. This explains why so many flocks look ragged in early summer.

It is a noted fact that the majority of cases where roup has become epidemic among fowls, the latter were crowded in tightly built houses, when the weather is very cold, and allowing the houses to remain closed all the next day. This creates a moisture which generates dampness, and the whole house feels very much like a vault. At night the house is more or less filled with dampness emanating from the fowls' breath, but if on the following morning the windows are open wide this dampness will be dispelled. This is a great point in favor of the open or curtain front plan of house.

It takes from seven to nine months for a capon to develop its excellence. Those weighing six pounds command earliest sale, but nine to ten pounds birds bring best prices. Caponizing is performed when the birds are about two or three months old—before the comb develops.

If the law becomes generally effective, that cold storage and preserved eggs must be labelled and sold as such, there will be little if any damage (Continued on page fifteen)

Following low round trip rates apply from Salt Lake City:

<b>Home Visitors'</b>	Denver .....	\$22.50
<b>Excursions</b>	Colorado Springs.....	\$22.50
	Omaha .....	\$40.00
	Kansas City .....	\$40.00
	St. Louis .....	\$51.20
	Memphis .....	\$59.85
	Chicago .....	\$59.75
	Minneapolis or St. Paul.....	\$53.85

### EAST

Via



October 23.

November  
20 and 23.

December  
18 and 22.

Limit 90 days  
from date of  
sale.

Proportionately low rates from other O. S. L. points to many other eastern points.

EXCURSIONS DAILY to Pacific Coast points until November 30th. inclusive.

October and November are ideal months in which to visit the Pacific Coast. When you go, go one way via Portland and see the "Beautiful Columbia River Country."

City Ticket Office  
HOTEL UTAH

## October Is Farmers' Month At The Panama Pacific Exposition

Exhibits of special interest to those engaged in Agricultural, Stock raising and Dairying, will be featured.

Low



Rates

VIA THE SALT LAKE ROUTE  
From all Utah Stations  
TO

**Los Angeles, San Francisco, San Diego**

For particulars consult any Salt Lake Route Agent,  
or address:

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# THE FARMERS' MARKET PLACE

**For the Buyer**

This market place offers our subscribers and readers a very good place to advertise. If you have something to sell or want to buy here is the place to tell it. These advertisements are read because they offer bargains, your bargain should be here. Take advantage of this opportunity today.

**For the Seller**

## THE GEM HERD.

### Improved Chester White Swine

The Home of the Western Prize Herd  
My winnings at Idaho State Fair 1913, were 13 first, 3 seconds, champion boar and sow, and champion fat barrow  
At a Tri-County fair held at Jerome, Ida., I took all but one second. I have anything wanted in Chesters from a weaning pig to a champion boar or sow at prices all can afford. High class stock. Write me.  
For Reference—all old customers.

**GEO. H. LAWSHE.**

Falls City, Idaho

### FOR SALE

A registered Holstein bull three years old. Gentle and good size. Mostly white. For further information write.

**LELAND STEVENS**

Oakley Utah

### FOR SALE

Foundation Stock in Holstein Fresian's and Duroc Jerseys. Will exchange a few for hay or grain. For breeding and particulars write

**JOHN W. STUBBS**

R. D. No. 2. Provo, Utah.

### FOR SALE

#### DUROC! DUROC!

Four 11 month old Boars. Fine specimens. Large bones. Good hams. Satisfaction guaranteed or money refunded. Price \$25.00 each. Four 4 month old. Same characteristics. Same guarantee \$12.50 each. Order quick. All show ring winners.

**GEORGE ROMNEY, JR.**

Smithfield Utah

### WILLOW TREE STOCK FARM

P. O. B. 449, Lehi, Berkshires

Males or females

2 to 3 months old.

Selected from the

Masterpiece

Premier Herd. \$10

a piece. None Better. Why pay more.

### FOR SALE.

One team percheron colts weigh 13-14 hundred, well broke and good workers. Coming 4 year old.

Apply to

**O. ABEL**

Lewiston, Utah.

### DUROC JERSEY SWINE

Sows with or without litters, young pigs, and Boars for service at slaughtered prices.

**PULLUM FARM**

Trenton Utah

## BUTTER WRAPPERS

We carry a large stock of the Best Vegetable Parchment Butter Wrappers and Especially Prepared Ink for Printing the same. We furnish them Postage Prepaid at the following Prices, money to accompany order.

100	.....	\$ .90
200	.....	\$ 1.25
500	.....	\$ 2.00
1000	.....	\$ 2.75

Send all orders to

**THE UTAH FARMER**  
LEHI, UTAH

## THE ALLIANCE INVESTMENT CO. SALT LAKE CITY, UTAH

No 11 Main Street.

We buy sell and exchange farms, ranches and city property.

We buy and sell mortgages and bonds.

We write Fire, Automobile and Plate Glass, Insurance.

We will mail you a list of our exchanges free on request.

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Was. 4443 11 Main St.

SALT LAKE CITY, UTAH

### IF YOU WANT

#### A BARGAIN

"SEE ME"

160 acres South Jordan, \$20.00 per acre. Terms. Would take city property for equity.

320-acre stock ranch in Nevada, 100 head horses and mules, all cattle hogs, machinery; in fact everything on place goes but some furniture. Good free range for 600 head, only \$20,000; terms.

100 acres Sevier valley, house, stable, sheds, first class water right, part in alfalfa, fine for beets, grain and hay. Big snap at \$4500.00—\$1500 cash, balance easy.

290-acre improved ranch 4 miles from Richfield, independent water right, good for beets, hay, grain and stock. Horses, cattle, hogs all machinery and most of crop go with place. Cheap at \$75.00 per acre; terms.

**GEO. W. DANLEY**

SALT LAKE CITY

707 Walker Bank Bldg. Wasatch 2989.

### BARGAINS.

One 16-Horse Steam Tractor.

One 20-Horse Gasoline Tractor.

Have been used for short time, but are in first-class condition.

Write for price and details.

**S. PETERSON & CO.,**

210 So. 6 West, Salt Lake City

## Money to Loan

On improved farms with primary water rights, at reasonable rates."

### INTER-MOUNTAIN LIFE

#### INSURANCE CO.

11th Floor Boston, Bldg.

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## FRUIT AND GARDEN FARM.

8 acres—part of the old Central Experimental Farm. Only ¼ mile from Lehi, Sego Lily School and Lehi 4th ward meeting house. A farm on edge of Lehi City Limits. 360 apple trees. Prunes, currants, and gooseberry trees.

CASH OR TERMS.

**A. F. GAISFORD**

Lehi

Utah

## RICHARDS' DUROC JERSEYS

WON AT UTAH STATE FAIR, 1915—Grand Champion Boar, Grand Champion Sow, Senior Champion Boar, Senior Champion Sow Eight First Prizes, Five Second Prizes, and Five Third Prizes.

**RICHARDS DEFENDER**, Grand Champion Boar was pronounced by many capable judges to be the best Duroc Boar ever brought west. He is 17 months old weighs over 500 pounds. The big type with quality. That's why he has so many admirers.

We purchased Junior Champion Sow and first and second prize under six months sows, so that we now have in our herd practically every first prize winner at the 1915 show.

We can make immediate deliveries of young stock, either sex, from this champion herd at reasonable prices.

Express rates on stock purchased from us is a small item as our ranch is only 135 miles north of Salt Lake City.

## RICHARDS' LIVE STOCK COMPANY

VIRGINIA

**JESSE S. RICHARDS**, Manager:

IDAHO

### WANTED

Farm land in exchange for city property.

**BRUNEAU-HILL INV. CO.**

Was. 1468

343 Main

SALT LAKE CITY

### FOR SALE

The best hog and dairy farm in Utah containing eighty acres. Also a few very choice duroc boars ready for service.

**WILLIAM MERRILL**

Richmond

Utah

### UINTAH BASIN LANDS

160 acres all cultivatable, full water right Dry Gulch Irrigation Company, 80 acres fenced, house, well, cellar, few trees, 40 acres cultivated. District school 1 mile. Lies 3 miles north Myton. \$4000, \$2000 cash, balance terms.

160 acres, 155 acres cultivatable, full New Hope Irrigation Company water right, 50 acres Dry Gulch Irrigation water right, house and 20 acres alfalfa. District school adjoining. Situated 4 miles north of Myton. Price \$3500. \$750 down balance easy terms.

**R. S. COLLETT**

Roosevelt

Utah

## Water Development

WELL DRILLED—ALL SIZES—ALL DEPTHS—WORK GUARANTEED.

Water developed for private, farm, municipal and irrigation purposes.

### PUMPING PLANTS

INSTALLED.

## DESERET DRILLING CO.

(Incorporated)

office 2nd West and South Temple  
Salt Lake City, Utah.

What better advertisement can the small town have than a good park and well-kept school grounds.

## We Have For Rent

well improved irrigated farm of 74 acres, near sugar factory in Utah. About half in alfalfa balance to be put in beets. Good buildings. Don't answer unless you are well equipped to handle a place of this kind.

## MILLER & VIELE

FARM LOANS

803-7 Kearns Bldg.

Salt Lake City

FOR SALE:—One Big Bull Tractor. Will guarantee it to pull to twelve inch plows. In good condition.

**H. E. MILLER**

R. D. No. 1, Box 226. Riverton, Utah.

## THERE'S MUCH IN THE CARE

(Continued from page fourteen)

done the poultry business. In that case they will not compete with the fresh egg market, and the later will naturally get a better price. It is when the stored egg is allowed to compete with the fresh article that an injustice is done to both the poultryman and the buyer.

Common baking soda is a great relief to fowls suffering from loose bowels. Put a teaspoonful to a half gallon of drinking water, daily.

The following method for determining the age of eggs is said to be practiced in the markets of Paris. About six ounces of common cooking salt is put into a large glass, which is then filled with water. When the salt is in the solution an egg is dropped into the glass. If the egg is only one day old it immediately sinks to the bottom; if any older it does not reach the bottom of the glass. If three days old it sinks only just below the surface. From five days upward it floats; the older it is the more it protrudes out of the water.

Color of yolk, quantity of contents and shape of eggs are all more or less governed by the food and feeding.

Cuttings of grapes may be taken this month and stored in sand or sawdust until next spring, when they may be set out.



## Safeguarding Roads In Winter

Water, not cold, is the cause of the deterioration of roads in winter, according to the road specialists of the United States Department of Agriculture. Cold weather does not in itself injure roads no matter whether they are earth, gravel, or macadam. In fact an earth road will stand more traffic when it is solidly frozen than at any other time. Excess water, however, is always detrimental to a highway. When cold weather turns this water into ice, the damage that it does is greatly increased. Ice occupies considerably more space than the water from which it is formed, and every person who has lived in a cold climate is familiar with the powerful bursting effect of water when left to freeze in a confined vessel. The same action takes place when a wet road freezes to any considerable depth. It simply bursts or, as we generally term it in road parlance, the road heaves. Later, when the frost leaves, the road is disintegrated and ruts badly. If this process is repeated a number of times during the winter, a gravel or macadam road may be practically destroyed, while an earth road may become entirely impassable.

A dry road will not heave. Rock, gravel, sand, and even clay when perfectly dry contract slightly on freezing. In order to expand on freezing, these materials must contain or be mixed with water, and the more water they contain the greater the expansion which takes place. But so long as the road remains frozen, the damage does not become apparent. Hence the frequent and erroneous idea that it is the thaw which injures the road. The injury was done when the water in the road froze and the particles of the road surface—broken stone, sand, or still finer particles of earth or clay—were pushed apart by the expanding power of the freezing water. The thaw merely allows the ice to melt and assume its original volume as water.

The remedy is self evident. Keep the water out of the road. The time to begin preventive measures is early in the fall, before the rains begin. If the road goes into the winter thoroughly dry with the surface and drainage in good condition, the chances are extremely favorable that it will come out all right the following spring.

Keep the ditches and drains open. Remove all accumulations of weeds,

grass, etc., which tend to retain moisture and obstruct drainage. Furthermore, do this work early, while the ground is still dry and hard. Vegetation and litter hold water like a sponge and allow it gradually to soak in and soften the earth. The job before the road man is to keep the hard dry surface formed in the summer time from becoming softened by the fall and winter rains and snows. When the fall rains begin the earth or gravel road should be dragged frequently to prevent the formation of ruts and the collection of water. All graveled places on macadam surfaces should be carefully filled in and consolidated.

During the winter, whenever a thaw is coming on, the cross rains and side ditches should be opened up as far as possible, so as to prevent water collecting along the roadway. If the thaw is so pronounced that the roadway is softened, the drag should be used; sometimes one round trip of the drag, with the hitch reversed, will entirely rid the earth road of slush and melting snow and leave the road surface practically dry. Don't get the idea that the drag is not needed on your earth and gravel roads in the winter time. Instead, keep it where you can get at it readily, for if the winter is an ordinary one you will need it many times.

Winter destruction begins the early

fall. The best way to prevent such destruction is to forestall it. Keep the road dry, and remember that so long as it remains so, it will not be seriously injured by frost. Keep the drains open, the ditches clear, remove all vegetation and litter, and use the drag frequently. If the road is kept dry to a depth of 2 feet below the surface little trouble will be experienced from the coldest winter.

To have exceptional opportunities come one's way is luck; to have lesser opportunities and use them well is good fortune, because it is self-improvement.

The brood sow should have comfortable shelter for the winter with plenty of good clean straw. This will contribute to her well-being and in that lies strength for her offspring. The shelter should be placed a considerable distance from her feeding place, in order that she may be compelled to take exercise.

### A PROBLEM SOLVED

Anyhow, there's one advantage in having a wooden leg," said the veteran. "What's that?" asked his friend. "You can hold your socks up with thumb-tacks."—Columbia Jester.

## Seven and Three-Tenths Percent

a year will pay a loan from us, both interest and principal in 35 years, without commissions, renewal charges, or other expense.

On a loan of \$1000, \$73 a year pays both interest and principal. At 8 percent you are paying \$80 a year for interest alone and at the end of the time you owe the principal of \$1000. Can we not explain our plan to you?

This is a Co-operative Association, therefore, you must necessarily become a shareholder in order to enjoy the advantages it has to offer.

Each share of stock will entitle you to a loan of \$1500.00. Your share of stock will net you annual dividends. The stock will cost you \$100 per share, \$50 down, \$25 in 5 months and \$25 in 8 months without interest.

The sooner you join the association the sooner you will get your loan.

Call or mail a postal card today to the

**The Inter-Mountain Rural Credit Association**  
McINTYRE BUILDING.

SALT LAKE CITY, UTAH.

# 6%

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This company will be  
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JOIN THE  
ASSOCIATION  
and you will  
REAP THE  
BENEFITS

A  
Co-operative  
Organization

THE INTER-MOUNTAIN  
RURAL CREDIT  
ASSOCIATION  
INCORPORATED

Money loaned  
5 to 35 years

THE COMMISSION APPOINTED  
BY THE UTAH STATE FAIR  
TO ORGANIZE THE  
INTER-MOUNTAIN RURAL CREDIT ASSOCIATION

The Intermountain Rural Credits association booth and representatives at the Utah State Fair. Right to left—Louis Hammond president of the association; L. Allen, T. T. Moyes, James T. R. Albert Moyes and V. H. Gregg.

This association has been organized for the purpose of furnishing money to Utah and Idaho farmers at 6 per cent for periods of from five to thirty-five years. Although the association has been organized less than a month, the farmers are receiving it with enthusiasm. The importance of rural credits organizations is becoming recognized throughout the country, as was evidenced in the resolution endorsing the organization of associations, passed about two weeks ago by the International Irrigation congress, while in session at Los Angeles. In connection with the popularity of the movement it is noteworthy that "Rural Credits" day was celebrated at the Panama-Pacific exposition September 22 and Myron T. Herrick, formerly ambassador to France, delivered an address on the subject. The Intermountain Rural Credits Association has its head offices in the McIntyre building, Salt Lake.



# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region

OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE

VOLUME XII; No. 14

LEHI AND SALT LAKE CITY, UTAH

NOVEMBER 6, 1915



A FAMILAR SCENE ON MANY OF OUR DRY-FARMS. WHEAT IN STACKS READY FOR THE THRESHING MACHINE. MANY THOUSAND BUSHELS OF WHEAT WERE PRODUCED THIS YEAR BY THE SCIENTIFIC METHODS OF DRY-FARMING. THIS METHOD OF FARMING HAS GROWN SO MUCH IN THE PAST FEW YEARS THAT IT IS NOW CONSIDERED AN IMPORTANT FACTOR IN OUR AGRICULTURAL DEVELOPMENT.



# Important Announcement

IT IS our hope and desire to make the Utah Farmer better and more interesting this winter than ever before—and yet the extent to which we will be able to do this will depend in no small degree upon the help and co-operation we receive from our readers.

The other day I had occasion to be in company with a number of farmers, and they had some very kind things to say about the Utah Farmer—"I don't see how anyone could get along with out the Utah Farmer" "valued it more than any other farm paper because it dealt with local conditions" and a few other such remarks were made by those of the group. I appreciated these sentiments very much, and to satisfy my own curiosity I looked up our records when I returned to the office, and I found that some of these people were in arrears for their subscription.

I believe these farmers meant what they said about the paper, but I do not believe that it had occurred to them that **it takes money as well as appreciation** to print thousands of copies of the Utah Farmer each week.

If every friend of the Utah Farmer would accept of this in the spirit in which we are writing it, and realize that it takes a great deal of money to print the Utah Farmer, we believe there would be very few who would not check up their subscription account; find out how much they are in arrears, if any, and send in their renewal, and would do it today. If everyone would accept of this personal appeal there is no doubt but what we would be able to make a better paper during the coming winter months than we have ever done before. This is just what we want to do, and this is the reason why we are making this announcement and personal appeal in order to help us carry out our plans.

We are sending a letter to a great many of our subscribers telling them just how their account stands and making a special proposition to have them pay a year or more in advance. We need your dollars and need them right now. Tell your friends or neighbors about the Utah Farmer and ask them to subscribe help boost a good paper—one that will do you or your friends some good if they will read it. The time to act is now.

UTAH FARMER

J. M. KIRKHAM, Manager.

## Why I Like the Utah Farmer

September 12, 1915.

Utah Farmer, Lehi, Utah:

Here are a few reasons why I like the Utah Farmer.

I have learned the best way to make a vegetable garden and kind of flowers to plant in my flower garden. The proper time to set out trees and flowers. I have learned that it is not the work that tires us so, but the ignorance of how to do things, the waste of energy, that wears out. Many girls start out to keep house, not knowing how to do only a small part of many things that go to make a home. From the Utah Farmer I have learned how to make bread, to care for hams and cure other kinds of meat. To make pies, cakes, Xmas candies. How to care for chickens, to make butter and how to put away eggs in summer for winter use. What kinds of foods are richest in energy and amount necessary to keep a farmer in good physical condition. How to care for infants. How to make the right kind of dishes to feed the sick. Have learned much about canning and preserving. Have secured many helpful suggestions that were worth remembering about my house work.

I read the advertisements and learn from them and literature that they send me many valuable things that helps me in doing my buying. If there is anything I want to know about farm work or the problems we have to contend with I always write to the Utah Farmer and one of their experts answer us. There is nothing to compare with a good farm paper for me, I have learned to read it and get much help from it.

MRS. JANE ANDERSON.



ESTABLISHED

1904.

PUBLISHED

EVERY  
SATURDAY.

VOLUME XII.

# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region.

COMBINED WITH THE DESERT FARMER AND ROCKY MOUNTAIN FARMING.

LEHI, UTAH, SATURDAY, NOVEMBER 6, 1915

ONE DOLLAR

A YEAR.

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No. 14

## Improving Crops By Seed Selection

THE breeding of farm animals and poultry is so well understood that we shall allude to animal life for examples and comparisons. Every farmer knows the advantages to be derived from the selection of choice breeding stock; and likewise the ill effects derived from the breeding of inferior animals, or inbreeding of any kind. We all know that the type of animals can easily be changed by breeding. A herd of beef cattle can be changed to the dairy type in a few generations by the use of dairy sires. We all understand that the offspring partakes of the parental nature. The successful poultry man selects his hens by using the trap nest, and year by year the common hen has been bred up to produce 300 eggs in a single year.

(Such hens are not very common, but each year adds more to the list, yet their origin was the common hen, bred up by proper selection of breeders.)

The careful dairyman, by weighing and testing the milk of each cow ascertains to a certainty which cows are the most profitable, and then follows up by keeping, not only the best cows, but also their offspring. Year by year those efforts have gone on, until cows that produce from 15,000 to 20,000 pounds of milk in a year are being heard of frequently.

We do not hesitate to say, feeding and care are very important factors in those splendid results, but we do say, and say it with great emphasis, that breeding is the first and most important consideration. Not long since, we examined two cows of the same farm, both were fed and cared for the same. In fact the two cows were watched for a comparison. The Holstein (dairy type) produced almost two times the milk produced by the beef type cow. The richness of the milk was nearly equal. The result simply showed the difference in breeds.

Many people seem to think nature provides ample means of animal improvement by breeding, but leaves the plants to make their way throughout the ages generation after generation, by mere chance or luck. Such is not the case. Plants may be changed by breeding, to just the same degree as animals. With corn the system is very plain and easily accomplished, but with small grains the plan is more intense and somewhat harder to master.

Walk through a field of wheat just as it is getting ripe and look at the heads. They will not all be large heads, but many will be small and "runty," just as in a large herd of domestic animals.

In the case of domestic animals we would choose the breeders from the best, and simply place the runts upon the market. Very true, feed and care have much to do with the growth and appearance of animals, and likewise climatic and soil conditions, as well as cultivation, have much to do with the size of the heads, but the comparison is there just the same.

Year instead of selecting the best heads, go through the patch and pull out the late, runty and smut infected heads. After that harvest and thresh the wheat in the little field and you will have quite a quantity of very choice seed wheat. Year after year, this method can be used to eliminate the "runts" and the poor breeders in the grain just as in live stock, and

select the right kind of plants from which to propagate. They select slips or roots from those plants which have demonstrated their ability to produce a large number of the very choicest blooms. Florists and orchardists who make real success of their vocation, understand that the selection of plants is one great factor. Then, of course, some more of the "knowing how" is in selecting soil, manner of cultivation, etc. It is a simple law of nature. Some of our readers may think it just as good to "fan out" the seed. That method is much better than the haphazard method of planting any kind of seed, with or without weed seed, just as it happened to be; but when we stop to think a moment, we know some of those fine big grains are from short heads, probably being a grain out of seven or eight instead of being a grain out of a head that produced 30 or 40 grains. If you went to buy a brood sow, and found two—both beautiful animals with no apparent choice; but upon investigation you find one to be of a litter of three and the other one to be of a litter of 9, we know you would choose the latter, because the chances are she would be a more productive breeder. If you did not know anything about the history of the case, you would be just as liable to choose the first one. By individual head selection in grains, we have seed from high producing heads, every grain a choice breeder.

Not only is the productiveness of plants indicated by the number of grains or seeds in a head or pod, but the number of plants that come from one seed is also an important thing to notice in most plant life. Some grains of wheat will throw out shoots or branches, until from the one seed will issue several heads.

Very true, the soil and climatic conditions, as well as how thick the seed was sown, controls to quite an extent the development of "shoots" on grain plants, but nevertheless plants growing under the very same conditions vary a great deal in regard to number of heads produced and also the number of grains in various heads. We want plants that will produce the most, in every way.

Very much the same rule applies in choosing potatoes for seed. We may select some nice smooth potatoes out of a pile of seed and yet know almost nothing of the individuality of the parent plant. Probably you may select two potatoes of equal size and looks. One may have come from a parent (hill) that produced 7 or 8 nice tubers, while the other potato came from a plant that produced but two

(Continued on page seven)



Let us pick out suitable breeders from among the wheat heads, just as we would with animals or poultry.

Just as the early heads are about ripe, go through the field and pluck a quantity of select heads. Do not grab the heads by the handful; but select each individual head on account of its merit. Do not hunt the extra thin places in the field but gather heads from the average places. This may seem like a slow method of getting seed wheat but yet a couple of thousand heads can be gathered in a reasonable time. A sack strapped over the shoulder, as if going to sow, can be used for carrying the selected heads very conveniently.

The heads thus gathered are threshed by hand and planted in a little field or patch by themselves. The next

the yields can be materially increased and the quality much improved.

Uniformity of ripening can be accomplished to quite an extent.

Wheat is subject to certain amount of inbreeding, but the effects of that seem to be so distant that it is not worth taking into serious consideration, at this time.

This same plan, or rule, is applicable to the oats, rye, barley, etc., just as well as to the wheat. In fact, it is a general rule that is applicable to all plant life, as well as animal life.

We see the beautiful roses and carnations for sale in the windows of flower stores and we wonder how they come to have such fine flowers. The answer is, they know how to grow them. Yes, sir, they know how; and one of the first things they learn is to



## DAIRYING

### DAIRY AND COMBINATION BARN S Clement White.

The successful dairyman who carries on his business in sections of the country where the weather is wet and cold by spells, must have proper barn accommodations for the cows. High grade dairy cows are valuable property; like other things of value they should be given the best care possible for the owner to bestow. High grade cows, the right kind of feed coupled with adequate barn accommodations from a combination which is certain to result in the dairyman's success. Without a good dairy barn the business of dairying is not profitable.

The general rules given for the construction of the horse barn apply equally well to the dairy barn. Ventilation, admittance of sunlight, drainage and convenience are the main considerations. The dairy barn is planned somewhat differently from the building designed especially for horses. The stalls should be in rows with the feeding alley between the two rows. Then the feed carrier will be available for all the cows. No dairy barn should be erected until the property owner has a well defined plan in mind regarding the cows' feed supply. The silo is a part of the modern dairy business; the silo may stand at one end of the barn, then the silage can be carried by the feed carrier down the feed alley from one end of the barn to the other.

Cleanliness is an important essential. A concrete floor is a guarantee that no refuse will remain in the barn, providing a litter carrier system is installed. Dairy barns have been much improved of late years; the modern barn is clean, well ventilated, well lighted and of the right temperature. A lighting system should be installed in the dairy barn. Electric or acetylene lights are satisfactory.

The combination barn is necessarily a "big" barn. There are no cut and dried styles in barn building, and the majority of farmers have their own ideas regarding the kind of structure, or structures, they prefer. There are many arguments in favor of the combination barn. In the first

place more housing room is provided at less expense than when separate barns are erected. Less lumber or other building material is required for the space enclosed; when the combination barn is properly planned there should be greater convenience and economy in caring and feeding for stock, cleaning out the manure, etc. Some farmers find that the combination barn is easier to keep painted and repaired than separate buildings. The big, combination barn makes a farm look prosperous; it should be remembered, however, that the combination barn which is to accommodate many head of livestock represents capital, and no detail which will make for convenience or stanchness of construction should be neglected.

There are two kinds of barn frames in general use. Plank, and post and plate. The post and plate type is much more expensive than the plank type. It is no stronger and will give no better service. In the majority of cases the plank frame is preferable. The self-supporting roof allows more space for mow room. Whether to use lumber entirely in the construction of the barn, or whether to use steel siding and iron roofing is sometimes a question. Homemade planks are all right for use in any position where they will not be exposed to the weather. Some property owners saw sufficient lumber from their own trees to make the barn frame, then use steel siding and iron roofing. The corrugated iron and prepared felting roofs are very satisfactory types.

Farmers find that it pays to store valuable alfalfa, hay, clover hay, etc., in a building where the elements cannot lessen the feeding value of the hay, and where it may be fed to stock with the utmost convenience. The hay barn should be built in a location where the loads of hay can be driven to it conveniently. The requirements of a hay barn are a good roof, sides and ends. The building should be strongly constructed so it will give continued service without repair. A hay carrier system should be installed so the hay can be lifted from the racks and carried to any part of the hay barn.

### "HOW MUCH FEED HOULD A COW RECEIVE?" R. W. Latta.

"The matter of how much feed to give the cow is a complicated question, the kinds and costs of feeds available, and the price received for the milk all having an influence on the amount of feed which it is profitable to feed. In the first place the cow requires bulky feed, and she should be given all the roughage which she will clean up. If this roughage is palatable and nutritious the cow will not require much in the way of grain in addition. The amount of grain which can be profitably fed should be determined for each individual cow by increasing her grain up to the point where she ceases to give a paying return in the way of increased milk production. In the principal dairy sections of the country a common practice is to feed daily 30 to 40 pounds of corn silage or roots, such as rutabagas, about twelve pounds of clover or alfalfa hay, and

one pound of mixed grains for every three and a half pounds of milk produced per day. In our experimental feeding we have found that with our comparatively cheap alfalfa and high priced grain, it is better to feed more hay and less grain. Except where the milk is produced for the high priced retail trade, we do not recommend more than one pound for each five pounds of milk. There is a difference between feeding for maximum production and for maximum profit, and each cow is a new problem for her owner to work out how much feed she will use most efficiently. If definite information were given as to the variety and cost of available feeds, more definite advice could be given as to the proper ration."

Investigations made by the Department of Agriculture indicate that the average cost of raising a heifer on a dairy farm in the northern and eastern sections is about \$61 at the end of her second year; this includes an allowance of \$7.81 for labor. The heifer is given a credit of \$8 for the manure she produces. Thus it appears that the dairy farmer in the sections mentioned can not afford to raise a heifer that is not worth more than \$60 when two years old.

### PREPARE BEES FOR WINTER

Remove honey at once.

Leave plenty of winter food.

Don't spill or smear honey about the hive. It leads to robbing.

Don't chill the bees while clearing the supers. Choose warm days for this work.

Wrap each hive with a layer of tar paper or other heavy, windproof material.

If any supers are left on the hives, remove the sections and fill the space with a bag of dry leaves.

Set the hives on a south slope and do not leave the front high enough to let snow or water blow or run in.

Now is the time to renew your subscription to the Utah Farmer. Do it today.

### FOR SALE—REAL ESTATE.

#### ON MORMON PIONEER PLAN.

A little home site and a little farm adjoining or nearby.

We have Agency for

87 acres of choice land on beautiful Provo Bench at \$200 per acre to cut up

for homes with piped water and other city conveniences. You can have

alfalfa land (48 acres now in);

wheat land or land in

cherries; or in

apples; or in

pears and peaches.

Cash one-fifth of purchase price,

balance like rent with interest

at 7 per cent per annum.

Irrigated from either the

Provo Reservoir water (near head of

the ditch, too, or from the

celebrated Alta ditch, fed from

Mount Timpanogas glacier.

Orem Interurban a mile away.

Write or call on us.

GEORGE M. CANNON COMPANY,

Hotel Utah Building. Phone 57.

## Churning Made More Easy

### A MINNETONNA HOME CREAMERY

Write for Particulars

Strevell-Paterson  
Hardware Co.

Salt Lake City, Utah.

**EAR PERFECT  
TAGS**  **Samples Free**  
**ATTACHED INSTANTANEOUSLY**  
Name and Address. Numbered if Desired.  
**LEG BANDS for Poultry, Pigeons, Turkeys**  
**SALT LAKE STAMP CO. Salt Lake, Utah.**

## Reliable Farm Bargains

Two Acres on 9th East and 16th South at  
\$500.00 per Acre. Very easy terms.

40 Acres near Tremonton, in the Great Bear River Valley. Full water right. In a high state of cultivation. Near good schools, railroads, churches, social conditions. In fact, a good place to make a home. Go with us and see this ground while they are harvesting the crops. Price \$115 per acre with 10 years to pay.

100 Acres right near Garland. This is some of the very best land in the Bear River Valley. Water right from Bear River Canal. All under cultivation. This property must be sacrificed at once for \$100.00 per acre. One-fourth down, terms on balance.

6½ Acres on 15th South and 3rd East. 7-room house, large chicken houses and other outbuildings, flowing well. This is one of the most ideal chicken ranches to be found anywhere. \$3100.00, one-tenth down one-tenth each year.

We trade City Homes for Farms.

**Kimball & Richards**  
"Land Merchants"

56-58 Main Street. Salt Lake City, Utah.

## Shoes Repaired by Parcel Post

### BIG SAVING IN SHOE BILLS.

Shoes are repaired same day as received and returned by C. O. D. Parcel Post, and delivered to your door. It is just like having a modern, well equipped shoe shop on the place.

We own and operate SEVEN shops, employing more than 30 people. We are the largest shoe repairing company in the West and guarantee to please every customer.

Price list: Mens half soles 75c, ladies half soles 50c, heels straightened 25c, rubber heels 40c and 50c. Patch 10c and up.

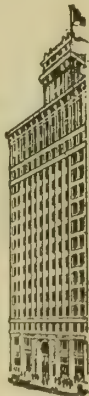
It will save the 10c C. O. D. charge by sending repair charge and postage with order.

**Royal Shoe Repairing Co., Inc.**  
28 So. Main St., Salt Lake City, Utah.

2473 Washington Ave. Ogden, Utah  
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8 Carr Fork, Bingham Canyon, Utah.

It is easy to keep on saving if you once start, and there is a vast amount of satisfaction in seeing your account grow.

Begin NOW with \$1. You can deposit or withdraw by mail.



**Walker Brothers  
Bankers**

Salt Lake City



## Farm Management Demonstrations

By E. B. Brossard, State Farm Management Demonstration Agent.

When the business of each individual farm has been carefully analyzed and compared to the record of the better paying farms and the average farm of a certain area, it is then that the record is gone over very carefully with the individual farmer and is thoroughly explained to him. The farmer then understands definitely where his strong points are in his farming business and where his weak points are. This comparison is especially good in showing up the "leaks" or "loop holes" in the individual farm business. The farmer knowing and understanding definitely these weak points in his business is anxious to make the changes which the record suggests would be more profitable. The following letter is a typical one stating the agreement with a farmer of the Hinckley Area, Millard County, Utah, for the reorganization of his farm business. An agreement similar to this is entered into between each one of the co-operating farmers, the County Agricultural Agent, and the State Farm Management Demonstrator for the purpose of increasing the labor income of the individual farm. It keeps a record of the understanding between the co-operating parties. It shows how definite and concrete and practical the Farm Management Demonstrations are.

Mr. John Doe,  
Hinckley, Utah.

Dear Mr. Doe:

After you and I had carefully analyzed your farm business for 1914 and compared it with the other records of the Hinckley Area we agreed that the following changes would result in your making a larger Labor Income, and we also agreed that these changes would be put into effect as fast as possible on your farm:

1. You will put all of 47 acres under cultivation.
2. Increase the number of acres of alfalfa.
3. Increase the number of productive animal units.
3. a. (This does not include work horses)

### Quality of Business

1. Put in Turkey Red wheat early in fall.
2. Keep Farmer's Accounts in the new account book which you now have for that purpose.

Mr. J. P. Welch, County Agent, will be very pleased to assist you in effecting any of the above changes. He will be glad to answer any questions regarding his work, or the keeping of the farm account.

Thanking you for your hearty

co-operation, and wishing you a more successful farm business year 1915, and success in keeping your accounts in your new book, I am,

Sincerely,

E. B. Brossard,  
Farm Management Demonstration Agent.

The suggestions as are made here in this letter were practical, and the farmer agreed that they were possible. For example: under Size of Business No. 1. The Farmer had 47 acres of land some of which was not under cultivation, all of which can be cultivated. The farmer saw by the record which was taken of his farm business the value to him of each acre that was under cultivation and saw immediately that it was to his advantage to put the remaining of his 47 acres under cultivation, and so he agreed to do so. The same is true with each of the other suggestions. They were made and agreed upon after a definite knowledge of the individual farm conditions had been obtained.

The suggestions which were made to the farmers were based entirely upon the business of other farmers operating in the same community under practically the same conditions.

These letters of agreement are of great value to the farmers who appreciate them very much and who are very anxious to have their business checked up in this way. There is no doubt that this careful scrutinizing and checking of the individual farm business will result in larger Labor Incomes.

### DRAIN WET LAND.

**Much Farm Land Should Be Drained to Secure Maximum Crop Production—Soil Condition Improved.**

By simple drainage much of the wet swampy farm land which can not be cultivated in its present condition may be made productive. There is also many a piece of cultivated land which is not producing what it could be made to do if it were properly drained. Indeed, according to the department's specialists, drainage in the United States is only fairly begun, and its immense possibilities are but little known.

Lands that are too wet for the most profitable production of crops, such as wet level land, low spots, and the dry subsoils of flat areas on the summits of knolls, river and creek bottoms, and peat bogs, should be drained. Even uplands may often be drained with profit, especially hillsides subject to erosion or inclined to be "spouty." Indeed, drainage is profitable wherever it is necessary to the fullest use of the land. It is not uncommon for lands too wet for cultivation to produce, when drained, over 100 bushels in Utah, 60 to 70 bushels of corn or oats or from one to one and a half bales of cotton to the acre. On much of the drained land the increase of yield is from 25 to 100 per cent, and by the increased yield and decreased cost of cultivation the value of the land is often doubled.

Drainage improves the physical condition of the soil by making it more porous and friable. The stiff soils are made more easy to work. The roots of plants are given a greater feeding depth by the lowering of the water level and hence the ability of crops to

utilize moisture is increased. Well-drained soils also absorb more rainfall than undrained soils, thus decreasing erosion and damage by floods.

Drainage warms the soil. Heat from the sun acts directly upon the soil when excessive moisture is removed by drainage. This is noticeable in the North, where the planting season is from one to two weeks earlier on drained land than on similar land when undrained. The danger of damage by frost both in the spring and in the fall is reduced. Warming of the soil also causes the seed to germinate more readily, thereby giving a better stand of crops and causing the plants to grow more promptly.

Drained land can be plowed earlier in the spring than undrained land. Crops can be cultivated sooner after a rain, and if covered tile drains are used instead of open ditches machinery can be used to better advantage and the cost of cultivation decreased.

Health conditions are also improved by the drainage of swamps and standing water. The breeding places for mosquitoes are removed, with the consequent abolishment of malaria in the locality.

The most practical drainage system is one that is adequate, permanent, uses the least possible land, and is not a hindrance to cultivation. Tile drains which empty into either open or closed outlets most nearly provide such a system. By the open-ditch system much valuable land is occupied, the drainage is seldom thorough, and the ditches become filled and have to be cleaned out. Open ditches sometimes occupy as much as 10 per cent and frequently 5 per cent of the area drained. Thus it is that tile drains, while more expensive to install, are generally the most economical in the end.

In laying out a drainage system, the outlet is the first consideration. On rolling or hilly lands channels have usually been washed out, although they may need to be straightened and cleaned out. On low, level land it is usually necessary to dig open ditches, and they should be straight and deep, since curves check the flow of water, while in a deep ditch water generally flows more rapidly and less vegetation is likely to be present. The outlets should be deep enough to take care of the flow from branch drains, which may necessarily be placed low to secure sufficient fall.

Open ditches work well with a drop of 4 feet to the mile, although some, of necessity, have no more than 1 foot drop. In loamy soils subject to freezing the sides of the ditch should have a slope of 45 degrees, in sandy soils a greater slope, while in stiff soils subjected to little freezing a less slope will do.

Outlet ditches should usually follow the natural course of the water, although efficiency and economy may necessitate a diversion from the natural watercourse.

When the ditch runs through a field, the earth should be leveled back from the bank, so that no more ground than is necessary will be lost from cultivation. When the value of the land is high, the open ditch should not be used where it is practicable to use tile. In the Middle West tiles as large as 3 feet in diameter are frequently used, and, being covered over, they do not occupy tillable land or divide a field. Where properly laid, there is little danger of the tiles filling and practically no maintenance cost. Be-



## Ford Owners Should Heed Expert Advice

—By The Oil Philosopher.

Expert advice on lubrication is sometimes expensive. But when expert advice can be had for the asking, automobile owners should appreciate it, especially when they realize that the proper solution of this problem, will lengthen the life of their cars, and maintain for them a higher selling value. In addition to which, there would be the satisfaction of full efficiency.

Profit by the experience of our oil experts. Their advice is free to you. They recommend

## Simplex "Ford Special" Auto Oil

for Ford cars. This oil is their special prescription for this particular car. It is the result of tests made with Ford cars, to ascertain their actual lubrication requirements, especially in this climate.

Simplex "Ford Special" Auto Oil flows freely at low temperatures, and has high heat resisting qualities. A clean, efficient motor is the result of its use.

If your dealer is out of stock, write the Utah Oil Refining Company, Salt Lake City, Utah, and it will see that you are supplied.

cause water runs faster through tiles they can be much smaller than the open ditch. The latter, however, has an advantage in holding more water after a rain, though, perhaps, not carrying more. The farmer is in a position to judge for himself when it is profitable to use tile.

Suburban Resident—"It's simply fine to wake up in the morning and hear the leaves whispering outside your window."

City Man—"It's all right to hear the leaves whisper, but I never could stand hearing the grass mown."

### Big Money in Running Water

Let us start you in business that will make you from \$15 to \$50 a day when farm work is slack. Other men have done it for years with an

#### Improved Powers Combined Well Boring and Drilling Machine

Same rig bores through any soil at rate of 100 ft. in 10 hours, and drills through rock. One team hauls and operates machine. Engine power if wanted. Easy to operate—no experts needed. Small investment; easy terms. Make machine pay for itself in a few weeks work.

There is a big demand for well to water stock and for irrigation. Write for free illustrated circulars showing different styles.

**Lisle Manufacturing Co.**  
Box 979 Clarinda, Iowa



## Field and Farm

### KINDS OF ALFALFA.

In Utah we have tried all these varieties and have found the Grimm to be the best except the common native alfalfa of Utah which has always out yielded the Grimm. Such is the report of our station commenting on the following report.

In Wyoming some tests have been made in regard to the varieties of alfalfa and the station agronomist T. S. Parsons give out the following.

The question is often asked, "Why does one variety of alfalfa stand through the winter better than another? Why does one variety yield more? And why is the Grimm variety so hardy."

This question has been given a great deal of study at the Experiment Station the past five years. In 1909 eight varieties of alfalfa were planted at the same time and at the same rate and on the same kind of soil. One-quarter acre of each variety was sown and on the following year another quarter acre of native seed was sown. These varieties have all received the same treatment as regards cultivation and irrigation, and the plats have been studied from year to year to note the habits of growth, amount of winter killing, yields, etc. A study of the following table will show some of these differences. The figures are the averages for four years with the exception of the native seed, which are for three years:

VARIETY	Average yield in pounds.	Average yield in tons	Average weight 10 green plants.
Turkestan	8,637.5	4.3	30 oz.
Sand Lucern	9,231.25	4.6	28 oz.
Grimm	11,056.25	5.5	48 oz.
Province France	7,037.5	3.01	48 oz.
Utah Seed	6,019.0	3.0	24 oz.
German Seed	7,927.25	3.4	24 oz.
Dry Grown Seed	7,462.5	3.2	32 oz.
Montana Seed	10,106.25	5.0	26 oz.
Native Seed	9,820.0	4.4	36 oz.

The study of comparisons was begun in 1911 when the varieties had all attained full maturity and were producing full crops. Good stands of all the varieties were obtained the first year. A study of individual years showed the Turkestan, Sand Lucern, Grimm and Montana seed to be about equal in yield, none of them showing any winter killing the first two years. The winter of 1912-13 was, however very severe and much alfalfa was killed out all over the state, and the spring of 1913 showed various degrees of winter killing in all of the varieties except the Grimm and the Native seed. These varieties, the Sand Lucern and Turkestan, have showed no winter killing since; the other varieties have to a slight degree.

Therefore, the question arises, "Has the type of the plant anything to do with its hardiness?" Probably it has. This also brings up the question, "Is the Grimm variety of sufficiently higher value to pay the advanced price for its seed?" The study of types is an important one and the

farmer is interested in the one that will make the most hay. Will the Grimm do this? Results show that it does on account of its resistance to winter killing. If there were the same number of plants per acre probably it would not, but usually more of the plants of the Grimm stand. It has not, however, such a great advantage over some other varieties, the cost of seed and yield per acre compared. At the Colorado Station the Baltic variety has outyielded the Grimm. The two varieties are much alike and probably of the same origin. The habits of the Grimm, however, commend this type to favor. Its heavy stooling habit produces finer stems and more leafy hay. The underground shoots and feeding roots near the surface make it more hardy and resistant to winter killing and late spring frost.

The Grimm variety seems more resistant to leaf diseases and is better adapted to dry farm conditions than most of the other varieties. It also requires less seed per acre for sowing. Seven or eight pounds per acre is sufficient for irrigated land, and half this quantity on the dry farm. No attempt at seed production has been made at the station, but it is probable that the Grimm will produce seed as readily as the other varieties. Therefore, there is no reason why it would not pay to sow an acre or two and produce seed for a larger area. This would not be an expensive operation even at the high cost per pound of the Grimm seed.

### MAKING MOST OF THE SOIL.

It was no uncommon thing a few years ago to hear American travelers boast that America could feed the world. They believed that the richness of the corn and wheat fields of the Middle West was inexhaustible. One young and intelligent man, returning to the East in the eighties, declared that the best lands of Illinois needed no fertilizer, and would need none in his lifetime. Today the average yield of wheat to the acre is about thirty-two bushels in England, thirty in Germany, and fourteen in the United States. So far from preparing to feed the world, moreover, we recently began to import meat from Argentina and Australia, and to wonder how much longer we could feed our own people at living prices.

A similar problem has agitated Germany, and with characteristic energy she has been ploughing her best brains into the land in an attempt to solve it. Her area is somewhat less than that of Texas. Her soil is, generally speaking, a poor one, rarely very productive except as it is made so; and her climate is rigorous rather than mild. Yet had she consented to remain at peace, she might today be supporting a population that approaches seventy million, and providing about ninety per cent of their food from her fields. The secret of her success seems to lie in her recognition of the fact that neither field nor forest is a mine to be worked out, but a laboratory to be worked in; and furthermore, she has insisted that there must be no waste products. As a result her forests, instead of being depleted by cutting, are yearly returning an increasing revenue; and her



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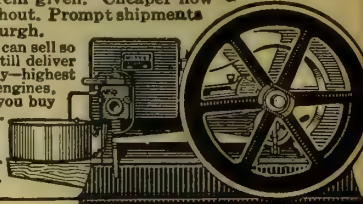
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fields, instead of being exhausted by the demands made upon them, renew their vigor annually.

We Americans are inclined to plead quality with a mistaken cheerfulness to the charge of wastefulness. We confound it with generosity, forgetting that wastefulness tends surely to a poverty in which real generosity is well nigh impossible. Thus we not only cut our forests recklessly, but according to recent estimates, often destroy sixty-five per cent of a marketable tree in working it up, so that only thirty-five per cent of its substance goes into the house for which it was intended. When we wonder at the almost prohibitive cost of good building material, it would be well to watch our European neighbor planning to turn the sawdust piles, such as position our streams, into briquettes for fuel. There is double profit in such economy. He not only saves material, but he helps to put agriculture and forestry upon so sound a business basis that they can command capital at moderate rates of interest.

Just now much is being said about better credit facilities for the farmer. There is need of them; but before they can come, certain conditions must be met. We must face the need of more scientific methods of production on the one hand and a more rigid economy of use on the other. We must increase and diversify our product, and we must utilize our waste. — Youths Companion.

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IMPROVING CROPS BY  
SEED SELECTION  
(Continued from page three)

tubers, under the same conditions as the first plant.  
Is it not reasonable to assume that the first potato is of a better producing strain than the latter, and consequently much more valuable for seed, even though it does not "look" a particle better? Then in order to get seed potatoes, it is necessary to dig a few rows with a fork, taking notice of each plant as the tubers are lifted; at the same time selecting a quantity of

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seed from those plants (hills) that show high producing powers. In that way each seed potato is known to be of a good strain; and from it can be expected the best results the following year.  
No matter whether the weather and culture is favorable or unfavorable, the rule of breeding is infallible and is applicable from the standpoint of comparison just the same.  
(Note: "Knotty" potatoes are the result of climatic conditions much more than the result of seed. However, some potatoes are naturally more rough than other varieties. For instance, well-bred early Ohio potatoes may be quite knotty one year, due to climatic conditions, and then the next year the knotty potatoes will produce a normally smooth product. We prefer to plant smooth potatoes as often as possible.)  
We pause right here to make this one broad assertion, which is as a text or key to the whole matter, viz:  
**There is just as much individuality in a plant seed, as there is in yourself.**  
Cotton growers of the south are rapidly learning the lesson of seed selection, and the most progressive growers get their seed from an early picking of select bolls, and those bolls must be from plants that are producing a large number of bolls. They do not want to use seed from a boll that was taken from a plant that has not produced a liberal number of bolls, even though the boll may appear very attractive. The parent plant must be known, in order that the grower may actually know what kind of seed he has.  
Corn is a plant more peculiarly adapted to improvement by breeding because of its size and general plant construction. Almost every kind of plants have male and female parts, although those parts may be divisions of a blossom. Corn has distinct sexual parts, so located on the plant (stalk) as to be easily controlled. The silks acting in harmony with the cob, comprise the female organism of the corn plant, while the tassel is the male organ.  
A quantity of pollen (dust like) is formed upon each tassel and when the pollen falls upon the silks, the process of fertilization is completed and grains of corn are produced; one grain for each thread or silk. It will be understood that each kernel of corn is therefore the offspring of two distinct parts and these parts may be related or unrelated, just as conditions may cause. Suppose the pollen falls upon the silks of the same stalk, the kernels are inbred; being from male and female organs of the same parent plant, just the same as would be the case of allowing male and female pigs of the same litter to inbreed. In an ordinary field of corn the silks are fertilized by pollen from many stalks; hence only a small per cent of kernels of each ear are inbred products.  
(Note: The percentage is governed to a great extent by the winds. Winds blow the pollen and keep down the percentage of inbred kernels for below what it would be if the winds did not blow while the pollen was falling.)  
Corn for seed should be selected not alone by appearance and shape, but from a personal knowledge of the parental qualifications of each ear. Parentage is ancestry and ancestry is a very potent factor in all life. We can prevent the inbreeding of corn just as effectually and carefully as with animals. In order to accomplish

the desired results we advise raising seed corn by the "patch" method, which, in short, is to select from two fields of as near the same kind of corn as possible. The seed thus selected will necessarily be of the desired type and appearance, or at least the best to be had.  
Before planting, each ear should be tested for germinating strength, etc. When planting the little field or "patch" may be of any size from a part of an acre to several acres, as is desirable. The two lots of seed are shelled separately and for convenience we will call them No. 1 and No. 2. We plant two rows of No. 2 and one row of No. 1; then two rows of No. 2 and one row of No. 1, and so on, all over the patch. (Note: You can plant more than two rows of No. 2 at a time if desirable, but no advantage is to be gained.) Be very careful to mark in a permanent manner all those single rows of No. 1. When the tassels begin to appear it will be necessary to go through the "patch" and clip off every tassel that appears in the single rows from seed No. 1.  
It will be necessary to go over the "patch" several times to prevent any tassels in the single rows from ever getting out far enough to produce any pollen.  
Not only should the tassels of the single rows be clipped, but the tassels in the other rows which issue from any barren stalks, or from little stunted stalks. You see we use the single rows for the female parts and the stalks of the other rows are the male parts, and in that way every kernel of corn produced on the single rows (No. 1) is a perfect cross between No. 1 and No. 2 (seed lot). Not a single kernel is inbred; therefore we take the corn from the single rows to be the perfectly crossed (hybridized) seed for the general crop the next year.  
The corn produced on the other rows (from seed lot No. 2), will be used for feed or market purposes.  
Barren stalks produce pollen, and the kernels which may be sired by such pollen will have a tendency to produce a higher percentage of barren stalks the following year. It is just as important that both parents of (ear corn be of high producing strains, as it is in the selection of breeding stock (animals or poultry).  
Like begets like, from the generations back to the generations of the future.  
It must be fully understood that ideal conditions and ideal products cannot be attained in one year or two, but year by year improvements can be made, and by persistent efforts the ideal of type and productiveness can be obtained.  
Even after several years of work have been expended along these lines, there will be some barren and "runty" stalks. That is simply the result of ancestry dating back several generations.  
We cannot expect to breed out in a very few years what has been bred in for possibly a century, but each year will change the conditions. Ancestry has its effects through all plant life, as well as animals, and the human family.  
(Note: If we may leave the subject for one moment we would add that if parental conditions and environments were carefully studied by all persons who contemplate a matrimonial voyage and the mating accomplished along more reasonable and natural lines, in-

stead of the present day "love at sight or for money" methods of matches, there would be less conjugal failures and less unhealthy and unwelcome children in this cold, cold world. The law of nature that controls the plants of the fields and fowls of the yard, should be considered with equal force within the realms of human life.)  
It must be understood that, even though cross bred, ears of corn vary in their power of reproductiveness.  
All may look like good ears, with some a little better than others. Just as the trap nest is used by the poultryman to ascertain the best egg-producing hens, so the ear to the row method is used to find out which ears are the best producers.  
That method can be used with any corn, whether cross bred or not. Simply select a number of typical ears and after shelling off the tips and butts, shell the balance in a paper sack (or anything); each ear separately.  
You then plant each row with a separate ear. The rows should be of uniform length and contain the same number of stalks (approximately). At the time of ripening, each row is gathered and the ears placed in separate piles. By considering those piles the grower can see which rows were the best, in quantity and quality. From the best or highest producing piles, the seed ears for another year should be selected.  
There is a great difference in productiveness of ears, that may look exactly alike and treated the same. Rows of corn for such comparison do not need to be of any great length, but should be uniform. If the field is very long, the rows may be divided into "ear" rows of 30 or 40 rods in length.  
Under any and all circumstances the ears selected for seed should be uniform, early matured, well filled at both ends. Not necessarily the very largest ears but should be covered with deep solid kernels.  
Test each ear in the spring for germinating strength. We want corn (or any seeds) possessing strong germinating powers. A person would not want to incubate a lot of eggs that would either not hatch at all, or possibly hatch out some little weakling chicks that would peep around for a few days and then die. The same rule applies to corn as well as eggs.  
Much can be said concerning various types of grain, corn, etc., the testing and planting, cultivation and preparation of the soil, feeding and marketing, but it is not our purpose to undertake the discussion of those subjects, and besides, local conditions modify the answers to a greater or less extent.  
But local conditions do not modify or change the great laws of nature wherein like begets like—"As ye sow, so shall ye also reap." The laws of propagation always have been and always will be—unchangeable.  
All in all, we have the one fundamental principle to confront, that it takes good to produce good. Study the parental conditions of seeds, just the same as stock. Study ancestry and make careful judgments when selecting seed.  
In arriving at the real value of a horse, his strength, action and endurance combined in the lightest possible weight, would be a fair test of his value. In judging a desirable draft horse, his quality means more than his bulk.





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We guarantee every subscriber against loss thru dishonesty or attempted swindle by any advertiser in this publication. We do not attempt, however, to adjust trifling differences between the subscribers and honest, responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within thirty days from date of the transaction, and the subscriber must have mentioned Utah Farmer when writing the advertiser.

On the average farm a flock of 100 to 150 hens is more easily made profitable than one of a thousand.

How beautiful a thing it is, that memory, if we will let it, garners for us the beautiful and forgets the mean and ugly.

If people would spend, in improving themselves, the energy they waste in talking about those of whom they are jealous, they would have no cause for jealousy.

I used to think I knew I knew,  
But now I must confess,  
The more I know I know I know  
I know I know the less.

If you are going to plant some shade trees in or around your lawn do not forget the English walnut, it is a good shade tree and will bring a profit to you. Along the road side and around your farm plant some walnut trees.

Over irrigation is much more serious than a failure to supply a sufficient quantity of water. The alkaline and salt lands all through the irrigated sections are, in the main, the direct result of too frequent use of irrigation water.

The breeding and feeding of swine is, and always has been, one of the most profitable industries that can be carried on in connection with general farming. It is an old saying that "For big money breed horses, for sure money breed cattle, but for quick money breed hogs." Good

hog feed can be produced here as cheaply as any where. Climate, soil and market are all favorable to this industry, and we would like to see more of our farmers reap the rewards sure to come to those engaging in it.

If you have done some seed selection on your own farm, you know the value of it. If you have not, why don't you learn from the experience of many others, that it pays to select your seeds. It pays to plant only the very best seeds. It pays in dollars and cents for the time you spend, if you can only secure good seeds.

#### ABOUT FEEDING CALVES.

Some farmers and dairymen are always scheming and asking questions to see how cheaply they can manage to feed their calves. Is it good business to stunt or under feed a calf that will grow into a seventy-five or hundred dollar animal in two years? Economy in feeding livestock is always to be encouraged and practiced. A good calf is entitled to nourishing feed and the best of care. If one is only half feed it usually results in a stunted calf or scrub cow. Many farmers do not seem to realize the importance of the first few weeks in the calf's life. It should have the best of care and feed. Give the calf a fair chance and it is one of the most profitable animals on the farm.

#### A SHIPMENT OF HOGS.

An eastern farm paper makes editorial mention about a shipment of 1,750 hogs that was recently received at Kansas City from Snake River Valley Idaho. These hogs averaged 200 pounds and traveled the 1600 miles in three days. The important thing about this shipment was, that western producers are competing with the corn belt hog growers. Eastern people are awaking to the fact that we can produce hogs at a very low price. Here is what they said about this shipment.

"Hog production cost on alfalfa and barley, grown in the fertile, irrigated valleys of the West, is in some cases remarkably low. It must have been so in the shipment mentioned if it could carry the expense of a 1,600-mile freight haul profitably, though we have no evidence that it did."

We do not know anything about the details of this shipment but our guess is that the hogs were sold at a profit. We know that others have made a profit for their owners under similar conditions.

#### DRY-FARMING.

We were asked the other day, what is dry-farming? Some people seem to have a peculiar idea about dry-farming.

Dry-farming means simply the conservation of moisture. It means the storage of water in the soil to provide the plant in time of need. It has come to be recognized that dry-farming principles do not apply alone to desert land where irrigation is not feasible, nor to prairie land where the precipitation is uncertain, but it is a system of agriculture of universal application.

It is just as essential in Illinois or Iowa, where there is abundant rainfall, as in Idaho or Utah, where there is a limited supply. Its principles are applicable and indeed essential on every irrigated farm. Dry-farming principles teach the conservation of all the natural precipitation and is thus a fundamental art. Where the stored water

is not sufficient for crop production water is artificially added in irrigated sections and thus irrigation is a supplementary process or a supplemental art.

The two go hand in hand. In humid sections the precipitations often comes at certain seasons and fail at just the time when the plant is in greatest need. Conservation of the moisture for this time of need is the mission of dry-farming.

Dry-farming concerns itself therefore with conservation of moisture since the question of available plant food in the soil is directly dependent upon the amount of moisture present, it is readily seen how far reaching this question really is.

Dry-farming is thus a question of world-wide importance. Its principles are of universal application and its mission is the bringing into subjection the world's tillable areas.

#### RENEW YOUR SUBSCRIPTION.

This is the season of the year when many of our subscribers renew their subscriptions. It is the harvest season and the farmer is receiving his money for the crops he has produced. We take this opportunity to remind you of the Utah Farmer and ask that you renew your subscription this month. We need the money just at this time to meet our obligations and will appreciate it if you will attend to this little matter now by sending us your check for a renewal to the Utah Farmer. You see the changes and improvements we are making, we promise to do even better if we can get all our readers to support us by renewing their subscriptions.

#### FARM MACHINERY.

Some of our readers will forgive us if we keep saying something about farm machinery. Many farmers have learned the profit that comes to them from protecting their machinery and carefully repairing it.

In what conditions are your mower, binder, rake and plow? Do not wait until you want to use them to find out. During the winter months or when you have time to spare, overhaul all your machinery for the coming year's work. Go about it systematically. Determine what extras are necessary and get them.

When you are ready to use them you will not have time to do repair work. The result is that you will attempt to work with them another year. Many expensive surprises are awaiting you. Parts will give away without warning, bolts with other parts will be lost for the want of a few minutes attention with a wrench. Every minute you loose means money to you. Why not remedy this condition for next year.

By all means clean every part of the machine in good shape before you put it away. The plow shears and mold-boards and other polished parts should have a coat of grease of some sort to prevent rusting. The paint brush will be a very profitable instrument to put on a little paint on the wood parts which have begun to check or wear. Paint saves many times its cost. To fill up as little space as possible in your shed, take off the tongues and binder wheels, etc. In fact, it would be better to place them overhead on the stringers than to take up valuable room on the ground. Just try it once. If you do not have a shed, begin now, and keep your tools dry, then rot and rust will not eat into your year's profit so much. You will find that the normal wear on your machinery is much less without rust and rot.



# Bees Must Be Warm

**Insufficient Insulation of Hives Found to be Chief Cause of Heavy Winter Losses.**

It is entirely practical, say specialists in the United States Department of Agriculture, for beekeepers to reduce their winter losses to less than one per cent. At present the loss is at least one-tenth of the colonies and this minimum is frequently increased to one-half or even more.

This unnecessary waste is ascribed in a new publication of the Department, Farmers' Bulletin No. 695, to two causes, inadequate stores and excessive heat production, forced upon the bees by insufficient insulation of the hives. No beekeeper, declares the bulletin, ever gave a colony too much protection in the winter; if the majority were to give enough, winter losses would be vastly decreased.

The aim of the beekeeper should be to maintain a temperature about the bees of approximately 57 degrees F. When the temperature in the hive falls below this point, the bees form a cluster. Those in the center begin to generate heat by muscular activity, and those on the outside crowd together to prevent the escape of the heat the others are generating. The lower the temperature outside of the cluster is permitted to fall, the more heat must the bees produce inside where the temperature frequently reaches 90 degrees or even more in abnormal colonies. Prolonged excessive heat production exhausts their vitality and even if they survive the winter they are unfit for the task of brood-rearing in the spring. This is usually the cause of "spring-dwindling." The adult bees, worn out by the hard winter, die faster than the young ones emerge and the population diminishes.

Increased heat production also causes increased consumption of stores. This in turn leads to an accumulation of feces with consequent irritation, further activity and more heat production. Sometimes the bees are unable to retain the feces and they are then said to be suffering from dysentery.

These facts emphasize the necessity of properly insulated hives in any locality where the temperature often falls to 40 degrees F. It is not possible to give the bee hives too much insulation. To give them too little is very easy and practically universal. As a means of insulation any of the various materials in common use, such as sawdust, chaff, broken cork, shavings, paper, dry leaves, etc., should prove satisfactory. With sufficient insulation the exact method of packing is also comparatively unimportant. A common practice, however, of packing nives at the sides, top, and rear only, leaving the front facing the South and unprotected, is to be condemned. The theory of course is that the heat of the sun will warm up the interior of the hive and reduce the work of the bees. Any channel, however, which admits heat into the hive will also let it out, and as in winter the sun shines even on clear days for only a small portion of the 24 hours, more heat is lost than gained by this method.

In experiments conducted in Philadelphia in 1913 and 1914, four single-walled hives were placed in a large packing case, two facing east,

and two west. Three inches of packing were placed below the hive, 5 inches on the ends, 6 inches on the sides, and 8 to 12 inches on top. The air that was in the hive but outside the cluster, was found to range generally from 55 degrees to 57 degrees. In colder climates, greater protection than this will of course be necessary. A safe guide for the beekeeper is the fact that there is no such thing as too much insulation.

The weak place in the insulation of hives is usually the entrance. An opening 8 inches wide and 3-8 of an inch high, constructed like a tunnel through the packing, is abundant. Even this small opening should be carefully shielded from the wind. As a matter of fact, however, the beneficial effects of even abundant insulation are to a great extent lost if the entire hive is not thoroughly protected from the wind. The desirability of such protection has long been known to beekeepers, but recent experiments have shown that it is even more important than had been supposed. Like insulation, it is not possible to have protection from the wind too thorough.

Proper wintering will greatly diminish the strain which severe weather puts upon bees but even under the best conditions their vitality will suffer before spring arrives and brood-rearing begins. For this reason it is most desirable that in the fall the colonies should be both populous and full of young bees. A strong colony presents, in proportion to its numbers, a smaller surface for the radiation of heat than a weak one and in consequence a smaller proportion of the heat escapes. In weak colonies, the bees in their effort to replace the heat that is lost, frequently raise the temperature of the interior of the cluster so high that brood-rearing begins. This is most disastrous if it happens at a time when frequent flights are impossible.

To secure strong colonies of young bees, too rapid an increase in the number of colonies during the summer must be avoided and prolonged brood-rearing carried on late in the season.

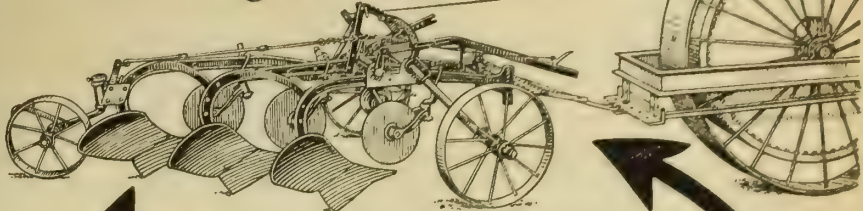
Essential as adequate insulation is to the safety of bees, if the packing is delayed too long, it may do more harm than good. A colony that has been forced by low temperatures to generate heat, is considerably disturbed by the process of packing and the temperature in the interior of the cluster is at once raised unduly. This may result in injurious premature brood-rearing. There is probably no place in the United States where it is safe to postpone packing later than Thanksgiving Day.

Excessive and unnecessary heat production and the death of colonies by starvation—a common occurrence—are closely connected. The more heat the bees are called upon to generate the more honey will they consume. In consequence if inadequate stores are provided for them they starve before the winter is over. The thrifty beekeeper will aim to save bees, not stores, and will therefore be liberal in his providing. If he really wants to save stores, however, he can do it by supplying insulation instead of stinting the bees.

When frames of honey are supplied

# MOLINE POWER LIFT GANG

For Light Tractors



A Combination Two and Three-Bottom Gang

Here is an economical outfit for the average sized farm. It is simple, practical, easy to operate and may be hitched to any type of tractor. This is the first light tractor gang to meet all requirements. Note the following special features and then write us or call on your nearest dealer for prices. Before buying a light tractor plow be sure to examine the

## Moline Power Lift Gang

**Set-Over Hitch**—Has a wide range of adjustment to right or left and may be hitched to any tractor; semi-rigid so the plow may be backed up even when in deepest furrow

**Construction**—Beams are extra heavy, same as used on our heavy type of engine gang plows. Strong arch braces, rigidly bolted between beams, extend downward to reinforce beams where strains are most severe.

Rear portion of beams is free from braces or bolts, providing ample adjustment for coulters, jointers or weed hooks.

Beams have unusually high clearance—won't gather trash.

**Self-Leveling**—Front furrow wheel is controlled by a new type of adjusting mechanism which makes the plow self-leveling from any adjustment of the wheels. When released plows strike the ground point first.

**Power Lift**—Operated by pulling a single cord which engages a friction clutch of the type used almost universally on automobiles, eliminating objectionable

features of the usual positive clutch. The power lift device operates all three wheels and is simple, quick in operation and adjusts the plows for depth, which may be changed while the plow is in operation by simply pulling the cord. These are new and exclusive features of the Moline Power Lift Gang.

**Rear Wheel**—Raised by power lift, is adjustable, locks automatically for plowing or backing, casters automatically for turning and transporting.

**Bottoms**—Furnished with 10, 12 and 14-inch bottoms in a variety of shapes to meet any soil condition.

**Quick Detachable Shares**—The Moline Power Lift Gang is equipped with Moline Quick Detachable Shares. To take the share off simply loosen one nut, unhook draw-rod and remove share. A great labor saver and easier and stronger than any other. Shares are made of Flying Dutchman Acme Steel and are warranted against breakage.

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they should be given before cold weather in order that the bees may form a proper clustering space by moving the honey. Extracted honey may also be fed. Honeydew honey causes dysentery and if present in the fall should be removed. In place of extracted honey, a thick sugar syrup is more frequently supplied. This is made of from 2 to 2½ parts of sugar to 1 part of water, by volume, with an ounce of tartaric acid added to each 40 or 60 pounds of sugar.

In conclusion the bulletin declares that a better appreciation of the fundamental principle of wintering—adequate protection to lessen heat production—will result in a great development of the possibilities of commercial beekeeping. The winter losses which are now regarded as almost inevitable can, in fact, be readily avoided. The consequent profit should revolutionize the beekeeper's balance sheet.

## AGRICULTURAL COLLEGE WINTER COURSES.

The winter courses at the State Agricultural College in Logan begin on November 16 and offer practical work in the study of soils, poultry keeping, fruit growing, stock judging, farm accounting, gasoline engines, and shop work in forging or in carpentry. These courses are of great present importance to the man on the farm, they last only 4 months, and they may be used to count toward a degree.

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Our latest Swell Fork Saddle, 14 inch swell front 28-inch wool lined skirt, 3-inch stirrup leather, ¾ rig, made of best oak leather, guaranteed for ten years; beef hide covered, solid steel fork.



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## THE HOME

### FOR THE HOUSEWIFE

By Laura B. Breese.

In salting almonds, use one tablespoon of olive oil, instead of butter, and note the improved flavor.

If a ham be plunged from boiling water at once into ice-water, the fat will harden white and firm, giving the meat a fine color.

Cook cauliflower in milk and water, a little more than half water. The vegetables will come out beautifully white and have a much richer flavor than when cooked in water alone. Cauliflower thus cooked and dressed with drawn butter, pepper, salt, and a dash of lemon juice, makes a palatable dish. Cooked in milk and water, and when chilled, cauliflower makes a nice salad, simply served with a leaf or two of crisp lettuce and dressed with oil, lemon juice, pepper, and salt.

**Lima beans with bacon.**—Cook until tender, a cup of lima beans in boiling salted water, to which a pinch of soda has been added. Drain off the liquid and add a pint of milk to the beans. Slightly thicken the milk with one tablespoon of flour blended with one tablespoon of bacon fat. Add salt and pepper and place on a platter surrounded with slices of broiled or fried bacon.

**Bean loaf.**—Add one cup of cooked navy beans, one and one-half cups of bread crumbs, one cup cream, to one cup cooked tomatoes (mostly pulp) and pepper and salt to taste. Mash beans fine, mix ingredients in order given. Bake one hour in moderate oven in buttered tin. Serve cold.

**Delicate scrambled eggs.**—Make two cups of hot white sauce, using four tablespoons of melted butter. Break four eggs and yolk of a fifth into a bowl and beat lightly. Beat in another bowl the white of a fifth egg as dry as possible. Put white sauce in a granite dish (in which it can be served) over the fire and when hot stir in the beaten eggs with yolks. Stir constantly, lifting from bottom of dish until it begins to thicken, then put in the beaten white and mix it as rapidly as possible. Take from fire and cover and put in fireless cooker to set. If you have none, wrap dish in many newspapers. It can stand as long as an hour without deteriorating. A convenient dish to make, if waiting for someone at an uncertain time.

**Peach tea cake.**—Put with two tablespoonsful of butter, one-half cup sugar, one egg, one-half cup milk, two teaspoons baking powder, and two cups flour. Spread in a large shallow pan and cover with sliced peaches, adding a few kernels, a sprinkling of sugar and cinnamon. Press down slightly and bake 35 to 40 minutes in moderate oven.

### CLEANING STOVE PIPES.

There are several ways by which chimneys may be cleaned. Perhaps the most common way is to fasten a brick to a rope and then pass it up and down the chimney, afterwards

collecting the soot at the stove pipe hole.

When stove pipes become foul with soot, instead of taking them down and cleaning them that way, often times they are cleaned by burning some material that will cause the soot to be consumed. The soot is usually unconsumed fuel in a very finely divided state. The material burned to consume this soot unites with it forming a more easily combustible mixture than the soot is by itself.

Scraps of zinc on hot coals will be found to be excellent to remove the soot. It will, likewise, serve to clean chimneys, if the latter are not too large. There are on the market several preparations for this purpose. They usually come put up in round paper cans. In some of these zinc is the basis of the preparation. It is not necessary to hunt for these specially prepared materials, for scraps of zinc, which are obtainable at any tin shop, will serve the purpose quite as well.

### HOME-MADE SOAP.

Cecilia H. Hendricks.

Now is the time of year for making up the the year's supply of soap for laundry purposes. A large iron kettle is a convenience, as with it a large amount of soap can be cooked at once. It is not a necessity, however. I have cooked many a batch of soap in a large granite dishpan on the kitchen stove, letting the soap cook while I did the morning work in the kitchen. A single recipe, as given below, will cook in a little more than an hour from the time it begins to boil. The advantage of cooking the soap this way is that one need not take a day off to do it, but can cook a batch whenever convenient, without spending special time on the work.

To each can of lye, use seven quarts of soft water and four and one-half pounds of grease. The grease may be raw or cooked. If raw, it should be cut in pieces the same as for rendering into lard or tallow. Of cracklings and meat skins, allow five pounds instead of four and one-half. The cleaner the grease the whiter the soap. Five ounces of borax added with the lye is excellent. This recipe will make from 14 to 16 pounds of soap, immediate weight.

It is best not to use a tin vessel for cooking, as the boiling soap corrodes tin. The soap will not be injured, but the vessel will. Granite or iron is best. The vessel should be at least half again as large as the quantity of soap to be cooked, and preferably larger, as the liquid boils up considerably.

Put the water in the vessel in which the soap is to be cooked. Add the lye, and stir well. Let this come to a boil. Do not skim. Add the grease, and stir well; let come to a boil, stirring occasionally. For a single recipe, about an hour to an hour and a half is required to cook from the time it comes to a boil. Large quantities take longer in proportion. It should be stirred occasionally while cooking, but does not require constant stirring. If the soap should boil over, decrease the heat. A very small quantity of cold water stirred



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**7476—Ladies' Shirt-Waist.** Cut in sizes 34 to 46 inches bust measure. Long or short sleeves and high or low neck may be used.

**7450—Rag Doll.** Cut in sizes 16, 20 and 24 inches in length. The pattern consists of a doll, a one piece dress and bloomers.

**7459—Ladies' Skirt.** Cut in sizes 22 to 32 inches waist measure. The skirt is cut in three gores and may have high or regulation waistline.

**7474—Girls' Dress.** Cut in sizes 6 to 14 years. Velvet and serge are used in making this dress.

**7445—Ladies' Dress.** Cut in sizes 34 to 42 inches bust measure. The dress closes at the front and has a four gored skirt.

Price of each of the above patterns 10 cents each.

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in well when the liquid is about to boil over may prevent it from doing so. This is only temporary help, however, for the more water added the larger the bulk and the greater the liability to boil over again. Also longer cooking will be necessary to boil down the water. I use a stick for a stirrer. Test by letting the boiling liquid drip from the stick. When it strings the way syrup will when well cooked, the soap is done. Or it may be tested by cooling a small quantity in a saucer. If it is hard when cool, it is done.

Pour into pans or boxes to cool. Boxes should not be lined with paper for the paper sticks to the soap and cannot be got loose. Cheesecloth or muslin is good to use as a lining, as it can be peeled from the soap when cold and used over and over. If the ends of the cloth are left hanging over the top of the box the soap can more easily be lifted out. When the soap is cold and firm, remove from the molds and cut into bars. Set in a dry place to harden. In a dry climate it is best to make the bars quite large. Otherwise the soap may dry out too much in time. Soap should not be allowed to freeze till after it is well dried. Frost will not hurt it much then.

If the proportions given in this recipe are used, the soap will not be hard on the hands. If less grease is used, the soap will be stronger in lye and hard on the hands. In any case, however, the addition of the amount of borax mentioned is an improvement.

Considering the grease worth four cents a pound, and counting lye, fuel, etc, the cost of this soap is about two cents a pound, immediate weight. When well cooked, it does not contain much more moisture at that time than laundry soap for sale in the stores. When dry, it goes farther. Factory-made laundry soap, depending on the quantity bought at one time, costs from five to nine cents a pound, considering that the bars weigh nine ounces usually, and never more than twelve. One could, therefore, afford to buy refuse tallow from the butcher at not more than five cents a pound, and save at least a hundred per cent on the soap made from it over factory soap, bought even by the hundred bar box.

The matter of cost aside, however, this homemade soap will do laundry work better than any factory-made soap. Especially is this true where the wash water is in the slightest degree hard. Personally I did not believe that such was the case until I had proved it beyond question. Clothes are much cleaner with less rubbing. Efficiency is after all, the real test. This soap is 100 per cent efficient.

### SHRINKING COTTON MATERIAL.

Cotton naturally shrinks when wet. This property is greatly increased in the weaving as the warp threads are stretched to their full length and held in place by the sizing and starch used in finishing.

If the garment is to be laundered it is better to shrink the material before making it up as it is not easy to make the proper allowance for shrinkage.

Fold the material smoothly and place flat in a tub or large receptacle, the bath tub is excellent. Pour in enough cold water to cover. When

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at the same price we pay. The difference between our prices and the regular retail prices will be more than enough to pay for all the bread your family eats. 25 labels or wrappers and a small amount of CASH is our plan. See your grocer or write The Royal Baking Company for list of premiums.

It's something worth while to save the cost of this "Perfect Bread."



**An Honest Bread at An Honest Price 100% Pure**

**Royal Baking Co., Salt Lake City, Utah**

the material is thoroughly saturated, pour in hot water gradually increasing the temperature until the water is as warm as the hand can stand. The hot water is needed to loosen the sizing.

The material should stand in the water over night when possible but at least two or three hours. Pour off the water and press as much out of the material as possible but do not wring. Hang on a line in the open air, stretching out smooth and pinning along one selvage.

Before the material is thoroughly dry take it down and press.

One must be sure that the colors in the material are fast before attempting to shrink it.—Charlotte E. Carpenter, Colorado.

### WHY DO SOME DRESSES SCREAM?

To know what colors harmonize, to know why others do not harmonize, and to be able to put that knowledge to practical use is of almost as much importance as a knowledge of cookery and serving.

Sometimes you see a dress that you think looks very fine, but you cannot tell why you think so; again you may see one that fairly screams at you that it is not responsible for the disaster of being made that way, yet you cannot tell exactly what is wrong with it. By using the type of dress that is becoming to the individual, and the combinations of colors that will harmonize and will be inconspicuous, the color and design girls study to eliminate examples of bad taste.

### SOME MENAGERIE

"It's funny, isn't it, that everybody in our family's some kind of an animal,"

"Some kind of an animal, Bobby? What do you mean?"

## Your Preserves Can Be As Good As the Imported Brands

The imported preserves and marmalades for which you pay fancy prices are put up with beet sugar—the same kind that is made right here in your own state.

A good thing for the housewife, to remember when ordering sugar. If you wish your canning, preserving, jelly making and pastry to be the success Europe enjoys, you should use Utah-Idaho Sugar—identically the same kind of sugar as that used in Europe.

Buy this perfect sugar. While enjoying real cooking success, you will be keeping money at home and receiving the indirect benefits of patronizing home industry.



"Well, mother's a dear, you know."

"Yes, certainly."

"And my baby sister is mother's little lamb, and I'm the kid, and dad's the goat."—Kellogg's Square Dealer.



## LIVE STOCK

### WEANING THE FARM COLT.

To keep the colt growing without interruption during weaning time and afterward is a most important consideration in producing horses profitably. A good horseman aims to replace the milk that the colt has been accustomed to secure from its mother. He tries also to reduce the worrying and fretting of the colt to a minimum. To wean a colt appears to be a simple matter. It is simple as many do it; yet the very low degree of success that is shown on many farms by their unthrifty colts is evidence that there is something wrong or that there is something lacking. Often in a few weeks during weaning time the youngster changes from the growing, sleek, milk-fat colt to a stiff-haired and unthrifty, stunted individual. The colt if properly cared for, need lose but little of his flesh, bloom and spirit.

### Grain to Be Fed

Grain must be used as the milk is taken away. It is necessary that the colt have been taught to eat grain before weaning is attempted. Oats have always been preferred by horsemen for young colts. They are undoubtedly superior to any other single grain. The colt likes a mixture or a variety of grains and will thrive best on such a ration. He relishes corn and it may well be fed as part of the grain ration. It may be said that corn contains a rather high percentage of fat. True it does and so does milk which is as nearly ideal food as nature can make. Corn should not be fed alone, nor in too great quantities. Bran is a splendid feed and contains material for bone and muscle. A mixture of oats 60 per cent., corn 30 per cent., and bran 10 per cent makes a ration that will enable any colt to grow rapidly. A handful of oil meal may be profitably added. Then he will be more likely to eat enough to almost make up for the lack of milk.

Hay should be provided in plenty. Doubtless as alfalfa or clover is the most desirable for young growing colts. Both grain and hay should be of the very best quality. If it is at all possible to furnish succulent grass for the colt it should be done. This is a big factor in preventing any check in the growth of the youngster.

### Company of Other Colts.

Naturally the colt will miss the company of his dam. If he has been accustomed to stay in the stable or yard while the mother is out at work there will be less fretting on that account. If the youngster has followed the dam constantly and has never been kept separated from her, he should be broken gradually to stay away from her if it is at all convenient to do so.

If there are several colts on the farm it is best to wean all of them at the same time. The youngsters love company and if there are two or more of them together, they will fret and worry less.

The stall or pen where the youngster is confined should be such that he cannot injure himself. The door and fence should be high enough so that he will not try to jump out. Nothing but a clean and comfortable place with plenty of sunshine and proper ventilation should be used for the colt during weaning time. It should be

made possible for the colt to exercise freely every day.

### Management of the Dam.

Just before weaning it is best to change the dam from succulent pasture to dry feed. If she is being fed grain the amount should be reduced to a minimum. This will have a tendency to reduce the milk flow. The colt should then be allowed to suckle only two or three times per day instead of being with the mother all the time or at least over night. It may be necessary to milk out the mare occasionally for a few days, in the case of large milk producers and where there is a tendency for the udder to swell. Having done these things it will be comparatively simple and easy to keep the colt away from the mother entirely without injury or handicap to either the dam or her foal.

Having made the change slowly and gradually the youngster will not miss the milk greatly. He will eat grain and hay, will take exercise and will grow without any set back. If he is kept healthy, thrifty and growthy, the very best of results will follow.—H. E. McCartney, Purdue Experiment Station.

### HOG CHOLERA.

Dr. H. J. Fredrick has recently returned from Milford, Beaver county Utah where he was sent by the U. A. C. Extension Division in compliance with an urgent request made by County Agent Christensen, to stop an outbreak of hog cholera. Dr. Fredrick reports that 250 or more hogs died from the disease or were killed to stop its spread before he got there. If more care and judgment had been used the number of hogs lost could have greatly reduced. All ailments among live stock should be immediately reported to the County Agent who can very often remedy the condition in 24 hours or less. If he cannot control it, he immediately secures experts who can.

Hog cholera is a very dangerous hog disease and no chances should be taken with it. Hog owners with experience can inoculate their own hogs with hog cholera serum which can be obtained from Salt Lake druggists. Do not use the virus to inoculate your pigs. Many times it only spreads the disease, and is dangerous when applied by an inexperienced hand.

Keep away from places contaminated with cholera germs. You can carry them on your feet or clothes, or your dog can carry them into your own herd. Tie your dog up. All pigs that die from the disease along with all pens and fences used for the diseased hogs should be burned. Plow up the runways and get rid of the germs. Safety first is the important factor so first of all use every means to avoid getting the disease in your herd.

No permanent system of agriculture has yet been devised which did not include live stock, and agriculture is the basis of our bank accounts. Upon it rests the commerce which feeds and clothes the world, the transportation which distributes where needed and the banking systems which pay the bills. The prosperity of the farmer is the prosperity of the world, and live stock is its carburetor.—I. D. Graham.

### GREASE HEAL.

Kingston, Utah.

Utah Farmer:

Gentlemen—I have a mare with some disease in her legs. A year ago the hair began standing out straight around the legs just above the hoof. Among this hair would form a scab and the skin wrinkles and cracks and the soar spreads. I have held it in check with a salve made with sulphur and Linseed oil but would like to get a remedy that will cure entirely. I will be pleased to have an answer in your next number.

Respectfully,

R. Albin Allen.

Answered by Dr. H. J. Frederick.

Animals affected with this trouble are not very easily treated. In fact it is difficult to ever come it. Where a case of Grease Heal is well developed I would advise applying a redhot iron to the granulations that have taken place on the legs. Wherever the tissues have budded out they should be touched and burned over with a redhot iron. Then you may apply about ten per cent solution of formaldehyde, and finally apply carbolyzed olive oil or vaseline. It will necessarily take some time to overcome this trouble and new tissue may have to grow into the place where the diseased material has been and skin cover the area. It is well at the same time to give the animal about one pound of epsom salts and about an ounce of ginger at one dose, as well as giving about one ounce of salt petre on the grain or in the drinking water daily for four or five days.

### ONLY HEALTHY ANIMALS ARE PROFIT PRODUCERS.

By W. A. Henry and F. B. Morrison,  
Experiment Station Wisconsin.

Sunlight is a most effective germicide. To prevent the contraction or spread of disease it is therefore important that the stables of farm animals be well lighted, with the possible exception of fattening animals feeding for short periods of time.

For the maintenance of health, exercise is another essential. The only exceptions to this rule are fattening animals soon to be marketed which make more rapid gains if not allowed to move about too freely. Abundant exercise is of special importance with breeding animals.

Farm animals are creatures of habit, and once accustomed to a routine of living show unrest at any change. The feed stable or lot, therefore, should be free from disturbance, and the providing of feed and water should be uniform in time and manner. Animals soon learn when these are to occur and as feeding time approaches the secretions begin pouring from the various digestive glands in anticipation of the coming meal. The system of feeding and watering and the character of the rations should be changed gradually, and only for good cause. In feeding operations a changing period is usually a losing period.

### HIS CASE

Mrs. Spenders—"Oh John, I saw a sign in Bergen and Co's window today that reminded me of what I am most in—"

Mr. Spenders (interrupting hastily)—"I, too, saw a sign in their window that reminded me of what I am. It read, 'Reduced to 49 cents.'"

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## Herefords

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at once

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## EMERSON Farm Tractor

Model L—12-20 Horse Power

A four-cylinder, 2-speed light weight tractor of great power, suitable for any size farm. Will pull the implements you now have on your farm—gang plows, harrows, mowers, binders, manure spreaders, road drags or graders. Will also operate your ensilage cutter, feed grinder, circular saw, etc. Does more work than horses—costs less and is so simple anyone can run it.

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**Miller-Cahoon Co.**

Murray, Utah

Idaho Falls, Idaho





## ORCHARD AND GARDEN

### ORCHARD RECORDS.

When you set out an orchard, always make a chart of the arrangement, giving a place and number to each tree; then record the numbers, variety, and date in a book. If you fail to do this, you will know how good a forgetter you are when you try to remember where you planted each kind. The information will be useful in a dozen ways. Take our word that it is worth while, and keep the records accurately and completely.

To label trees helps this plan and has other advantages. One of the best ways is to cut heavy zinc into strips about 10 inches long, 2 inches wide at the end and coming to an end at the other.

Put these in vinegar for a few hours to corrode them; when dry you can write on them with ink or with an ordinary indelible lead pencil, and the marks will stay on for 20 years. Twist the little end of a tag loosely about a limb, and let it hang down. Put on this tag the variety, name, the number, possibly the date planted, the number of bushels harvested each year, date of blooming, and other useful data. As the limb grows, loosen the loop a

little or remove the tag to a smaller limb. This helps greatly in the successful handling of an orchard.—Ex.

### UTILIZING LEAVES

In most towns and cities, autumn brings with it the pungent odor of burning leaves, the smoke of which settles like a choking pall over the streets and homes. The door yard cleaning days of spring are likewise marked with the incense of smoking vegetable matter that is being cremated along streets and alleys. Instead of smudging themselves and their neighbors, the inhabitants of our towns who own shade trees can often make far better use of the fallen leaves by composting them. The high degree of fertility usually noticed in newly cleared lands which have been covered with forests of broad leaf trees, is mainly due to the abundance of leaf mold which the soils contains. This material is especially valuable for its effects in increasing the moisture holding ability of light soils and of improving the texture of clay soils. Florists use leaf mold, where obtainable, for mixing with their potting soils, and it is

of equal value in the flower bed, the vegetable garden, and the field.

In our semi-arid regions, leaf mold does not readily form without a little care being given to the matter. The leaves may be stored in a large bin in some shady or secluded corner of the yard, or even in a pit dug in the earth. They should be packed in tightly and kept moist by an occasional wetting with the hose, or if in a pit, from the irrigating ditch, or they may be spaded or plowed directly into the garden.

Leaves also form a fair substitute for straw in bedding the horse and will add to the value of the manure for fertilizing purposes.

In case none of these uses can be made of the fallen leaves of trees, some local market gardener or farmer who knows their value may be given the privilege of hauling them away to use on his fields or in the compost heap.

The older nations of the world have learned to utilize every bit of waste vegetable matter in some such way and, although intensive agriculture is perhaps not yet so imperative in this country, this utilization of dead leaves is in line with the growing sentiment for the conservation of soil fertility.—B. O. Longyear, Colorado A. C.

### GREASE THAT PLOW!

The best tools go soon enough.

Ounces of grease save dollars in repairs.

The seeds of rust and decay bring a harvest of loss to the farmer.

If machinery displaces men and horses it demands more care than ever.

Keeping the polish on a moldboard may be better than shining in society.

Simplicity, reliability, durability, and accessibility should be sought when you buy tools.

We get good results from a mixture of whiting and hard oil. First make a thick paste then thin it by adding more oil. Apply to the moldboard with a brush and rub off with a gunny sack just before using the implements in the spring.—Missouri, College of Agriculture.

A small boy one day was asked by a clergyman if he knew what was meant by energy and enterprise.

"No, sir; I don't think I do."

The clergyman said: "Well, I will tell you, my boy. One of the richest men in the world came here without a shirt on his back, and now he has millions."

"Millions!" replied the boy. "How many does he put on at a time?"

## Seven and Three-Tenths Percent

a year will pay a loan from us, both interest and principal in 35 years, without commissions, renewal charges, or other expense, and you may pay off your entire loan any time after five years.

On a loan of \$1000, \$73 a year pays both interest and principal. At 8 percent you are paying \$80 a year for interest alone and at the end of the time you owe the principal of \$1000. Can we not explain our plan to you?

This is a Co-operative Association, therefore, you must necessarily become a shareholder in order to enjoy the advantages it has to offer.

Each share of stock will entitle you to a loan of \$1500.00. Your share of stock will net you annual dividends. The stock will cost you \$100 per share, \$50 down, \$25 in 5 months and \$25 in 8 months without interest.

The sooner you join the association the sooner you will get your loan.

Call or mail a postal card today to the

**The Inter-Mountain Rural Credit Association**  
McINTYRE BUILDING. SALT LAKE CITY, UTAH.

The Intermountain Rural Credits association booth and representatives at the Utah State Fair. Right to left—Louis L. Allen, P. T. Moyes, James T. Hammond president of the association; R. Albert Moyes and V. H. Gregg.

This association has been organized for the purpose of furnishing money to Utah and Idaho farmers at 6 per cent for periods of from five to thirty-five years. Although the association has been organized less than a month, the farmers are receiving it with enthusiasm. The importance of rural credits organizations is becoming recognized throughout the country, as was evidenced in the resolution indorsing the organization of

associations, passed about two weeks ago by the International Irrigation congress, while in session at Los Angeles. In connection with the popularity of the movement it is noteworthy that "Rural Credits" day was celebrated at the Panama-Pacific exposition September 22 and Myron T. Herrick, formerly ambassador to France, delivered an address on the subject. The Intermountain Rural Credits association has its head offices in the McIntyre building, Salt Lake.



## POULTRY

### WHY I PREFER LOW ROOSTS.

V. W. Hards.

I have found it a good plan to build the roosts low, for a variety of reasons, not only for winter use, but for summer as well. Then, when for any reason it is necessary to procure a fowl from among the flock it can be done without unnecessarily alarming or disturbing the remainder. This will be appreciated by any one who has attempted to take a frightened hen from a high perch, surrounded by a number of more or less alarmed and startled sister biddies.

Every poultry house should be provided with good roosts, and this brings up the question of the best location for them. Since the warmest air is near the roof, it is pretty certain that the most impure air is there also, consequently it is not a good idea to build the roosts so high that the fowls will have to remain for any great time in this impure air.

The old-style round roosts built up in ladder fashion are things of the past, as they well deserve to be. At roosting time the fowls instinctively tried each to secure a footing on the topmost roost, with the result that there was always a crowding and commotion, the weaker birds being forced to the lower roosts or to the ground. Then, too, in severe winter weather where the poultry quarters are cold and frosty, the birds often suffer from frozen toes. In the act of roosting, the birds' toes are clasped tightly about these round roosts, the circulation of the blood is impeded, and there is little protection against the action of frost.

Along in my early experience in poultry raising I used the old-fashioned roosts, as a matter of custom, but later on several matters led to a change. My flocks would come out of winter quarters with badly developed cases of bumble-foot and lameness, which I traced to the heavy birds jumping down from the high roosts and alighting on the hard floor, a pebble or small stick often causing a painful bruise which resulted in lame and swollen feet and legs. After considerable experimenting I finally adopted the roosts which I now use—2x4 scantlings, slightly rounded on the edges, placed flat about two and one-half feet from the ground. All the roosts are placed on the same level, which does away with scrambling for places.

The droppings board is placed about a foot below the roosts, high enough from the ground so the birds will not crowd underneath to spend the night if the roosts possibly become too full. Only enough birds are kept in the house for the roosts to accommodate, however, and a board six inches wide slants from the ground up to the end of the first roost to enable the birds to make the ascent easily. In this they are assisted by small cleats, about six inches apart, nailed across the surface of the board. When roosting time comes an observer may see a procession of chickens as decorous as so many deacons, marching up the inclined board to their nightly resting place.

Having used these flat roosts with real satisfaction, I have often recommended them to my neighbors and

poultry breeders, with the result that another desirable feature was discovered. The roosts being flat, when the birds assumed their natural roosting attitude their feet were completely covered and protected by their feathers, and, the toes not being contracted and cramped as in the case of round roosts, the frosty weather, failed of action, and there were no hens emerging from winter quarters with mutilated feet as the result of freezing. And cases of lameness and bumble-feet were rare, too.

When the feet of a laying hen are allowed to become frozen it has been found to have a noticeable effect upon the egg supply—similar, in degree, to the action of cold upon the combs. The advantage of allowing the feet to be covered and warmed by the plumage while roosting is, therefore, too apparent to warrant argument.

### HOW TO KILL AND

### BLEED POULTRY

At least 30 per cent of all the poultry coming into our markets is incompletely bled. Much of it is so badly bled that it results in a loss of from two to five cents a pound, as compared with the corresponding poultry which is well bled and in good order. Aside from the bad appearance of incompletely bled chickens, their keeping properties are very inferior. The flesh loses its firmness sooner; its flavor is not so good; the odor of stale flesh and finally of putrefaction comes sooner; and in every way the product is more perishable.

A very large portion of the unsightly poultry in our markets aside from the rubbing and tearing of the skins is caused by an incomplete removal of the blood. This is evidenced by red dots which frequently occur where the feathers have been removed, especially over the thighs and wings, or by the small veins, which mar the appearance of the neck. Generally it is the neck which shows most plainly the presence of blood in the fowl, or that a wrong method has been used in cutting the blood vessels in an attempt to empty them. The neck is the first part to discolor, becoming first red, then bluish red or purple and finally green as again progresses.

The department of agriculture gives the following directions for preparing poultry for market.

Grasp the chicken when killing by the bony part of the skull. Do not let the fingers touch the neck. Make a small cut with a small, sharp pointed knife on the right side of the roof of the chicken's mouth, just where the bones of the skull end. Brain for dry picking by thrusting the knife through the groove which runs along the middle line of the roof of the mouth until it touches the skull midway between the eyes. Use a knife which is not more than two inches long, one-fourth inch wide with a thin, flat handle, a sharp point, and a straight cutting edge.

If cookies are baked on the bottom of inverted dripping pans, they will keep from burning on the bottom and are more easily removed.

Following low round trip rates apply from Salt Lake City:

### Home Visitors'

### Excursions

### EAST

Via



October 23.

November  
20 and 23.

December  
18 and 22.

Limit 90 days  
from date of  
sale.

Denver .....	\$22.50
Colorado Springs.....	\$22.50
Omaha .....	\$40.00
Kansas City .....	\$40.00
St. Louis .....	\$51.20
Memphis .....	\$59.85
Chicago .....	\$59.75
Minneapolis or St. Paul.....	\$53.85

Proportionately low rates from other O. S. L. points to many other eastern points.

EXCURSIONS DAILY to Pacific Coast points until November 30th. inclusive.

October and November are ideal months in which to visit the Pacific Coast. When you go, go one way via Portland and see the "Beautiful Columbia River Country."

City Ticket Office  
HOTEL UTAH

## October Is Farmers' Month At The Panama Pacific Exposition

Exhibits of special interest to those engaged in Agricultural, Stock raising and Dairying, will be featured.

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Rates

VIA THE SALT LAKE ROUTE  
From all Utah Stations  
TO

**Los Angeles, San Francisco, San Diego**

For particulars consult any Salt Lake Route Agent,  
or address:

J. H. MANDERFIELD, A. G. P. A.  
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# THE FARMERS' MARKET PLACE

For the Buyer

This market place offers our subscribers and readers a very good place to advertise. If you have something to sell or want to buy here is the place to tell it. These advertisements are read because they offer bargains, your bargain should be here. Take advantage of this opportunity today.

For the Seller

## THE GEM HERD.

### Improved Chester White Swine

The Home of the Western Prize Herd  
My winnings at Idaho State Fair 1913, were 13 first, 3 seconds, champion boar and sow, and champion fat barrow.  
At a Tri-County fair held at Jerome, Ida., I took all but one second. I have anything wanted in Chesters from a weanling pig to a champion boar or sow at prices all can afford. High class stock. Write me.  
For Reference—all old customers.

**GEO. H. LAWSHE.**

Falls City, Idaho

### FOR SALE

Foundation Stock in Holstein Fresian's and Duroc Jerseys. Will exchange a few for hay or grain. For breeding and particulars write  
**JOHN W. STUBBS**  
R. D. No. 2. Provo, Utah.

### FOR SALE

**DUROC! DUROC!**  
Four 11 month old Boars. Fine specimens. Large bones. Good hams. Satisfaction guaranteed or money refunded. Price \$25.00 each. Four 4 month old. Same characteristics. Same guarantee \$12.50 each. Order quick. All show ring winners.  
**GEORGE ROMNEY, JR.**  
Smithfield Utah

### FOR SALE

One holstein bull calf two months old, sire is a grandson of the "King Of The Pontiacs." Price \$50.  
**G. A. DIXON**  
Garland Utah

## Percheron Stallion

An unusual opportunity to purchase a good stallion. Foaled June 1913. Utah bred. Sire imported Damocles. Very large and finely developed. Direct all inquiries to B. T., Utah Farmer, Lehi, Utah.

### DUROC JERSEY SWINE

Sows with or without litters, young pigs, and Boars for service at slaughtered prices.

### PULLUM FARM

Trenton Utah

## BUTTER WRAPPERS

We carry a large stock of the Best Vegetable Parchment Butter Wrappers and Especially Prepared Ink for Printing the same. We furnish them Postage Prepaid at the following Prices, money to accompany order.

100	.....	\$ .90
200	.....	\$1.25
500	.....	\$2.00
1000	.....	\$2.75

Send all orders to

THE UTAH FARMER  
LEHI, UTAH

THE ALLIANCE INVESTMENT CO.  
SALT LAKE CITY, UTAH  
No 11 Main Street.

We buy sell and exchange farms, ranches and city property.

We buy and sell mortgages and bonds.

We write Fire, Automobile and Plate Glass, Insurance.

We will mail you a list of our exchanges free on request.

THE ALLIANCE INVESTMENT CO.  
Was. 4443 11 Main St.  
SALT LAKE CITY, UTAH

### IF YOU WANT A BARGAIN "SEE ME"

160 acres South Jordan, \$20.00 per acre; terms; would take city property for equity.

320-acre stock ranch in Nevada, 100 head horses and mules, all cattle, hogs, machinery; in fact, everything on place goes but some furniture; good free range for 600 head, only \$20,000; terms.

100 acres Sevier Valley house, stable, sheds, first-class water right, part in alfalfa, fine for beets, grain and hay; big snap at \$4500.00—\$1000 cash, balance easy.

290-acre improved ranch, 4 miles from Richfield, independent water right, good for beets, hay, grain and stock. Horses, cattle, hogs, all machinery and most of crop go with place. Cheap at \$75.00 per acre; terms.

320-acre, extra well improved ranch in Sevier Valley, lot of registered Durham cattle, horses hogs and all wagons and implements go with place; \$33,000; terms, or take good city property.

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**GEO. W. DANLEY**  
SALT LAKE CITY  
707 Walker Bank Bldg. Wasatch 2989.

Wanted to hear from owner of good farm for sale. Send cash price and description. D. F. Bush, Minneapolis, Minn.

## Money to Loan

On improved farms with primary water rights, at reasonable rates."

### INTER-MOUNTAIN LIFE INSURANCE CO.

11th Floor Boston, Bldg.  
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### FRUIT AND GARDEN FARM.

8 acres—part of the old Central Experimental Farm. Only ¼ mile from Lehi, Sego Lily School and Lehi 4th ward meeting house. A farm on edge of Lehi City Limits. 360 apple trees. Prunes, currants, and gooseberry trees.

CASH OR TERMS.

**A. F. GAISFORD**

Lehi

Utah

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WON AT UTAH STATE FAIR, 1915—Grand Champion Boar, Grand Champion Sow, Senior Champion Boar, Senior Champion Sow Eight First Prizes, Five Second Prizes, and Five Third Prizes.

**RICHARDS DEFENDER**, Grand Champion Boar was pronounced by many cavable judges to be the best Duroc Boar ever brought west. He is 17 months old weighs over 500 pounds. The big type with quality. That's why he has so many admirers.

We purchased Junior Champion Sow and first and second prize under six months sows, so that we now have in our herd practically every first prize winner at the 1915 show.

We can make immediate deliveries of young stock, either sex, from this champion herd at reasonable prices.

Express rates on stock purchased from us is a small item as our ranch is only 135 miles north of Salt Lake City.

## RICHARDS' LIVE STOCK COMPANY

VIRGINIA

JESSE S. RICHARDS, Manager:

IDAHO

### WANTED

Farm land in exchange for city property.

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### FOR SALE

The best hog and dairy farm in Utah containing eighty acres. Also a few very choice duroc boars ready for service.

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### BARGAINS.

One 16-Horse Steam Tractor.  
One 20-Horse Gasoline Tractor.  
Have been used for short time, but are in first-class condition.  
Write for price and details.  
**S. PETERSON & CO.,**  
210 So. 6 West, Salt Lake City

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WELL DRILLED—ALL SIZES—ALL DEPTHS—WORK GUARANTEED.

Water developed for private, farm, municipal and irrigation purposes.

PUMPING PLANTS  
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## DESERET DRILLING CO.

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MRS. DR. FLINT THE WORLDS  
GREATEST HIPNOTIST AND 4  
OTHER BIG FEATURE ACTS

ALL FOR 10 CENTS.

121 East 2nd South  
SALT LAKE CITY, UTAH.

## We Have For Rent

well improved irrigated farm of 74 acres, near sugar factory in Utah. About half in alfalfa balance to be put in beets. Good buildings. Don't answer unless you are well equipped to handle a place of this kind.

## MILLER & VIELE

FARM LOANS  
803-7 Kearns Bldg.  
Salt Lake City

## THE COUNTY FARM-DEMONSTRATOR.

The cotton industry of the Southern States was saved by the work of U. S. farm experts who taught the people how to exterminate the Boll Weevil. Denmark has risen from a poverty stricken nation to one of prosperity by the organization of its farmers and the work of the county farm agents. Utah is now profiting by the employment and expert, efficient work of County Farm Demonstrators. The purpose of the county agents is to increase the profits of farming. His mission is among the farmers and his message is more efficiency and profit for the farmers. He has special technical training which equips him for his work. He is at the demand of the farmers at all times. He helps them with their livestock problems, already thousands of dollars have been saved the farmers this fall by immediate control of hog cholera due to the prompt action of the county agents. He helps with the tillage, crop, drainage, marketing, storage, etc. problems. He helps to keep the farmer out of a rut. He gathers facts of the best things that all the farmers are doing and reaches and uses them wherever conditions need them. He is the farmer's friend and adviser; a useful practical man, who lives and works for the betterment of agriculture and the success and growth of the farmer.

I do the very best I know how—the very best I can; and I mean to keep doing so until the end. If the end bring me out all right, what is said against me won't amount to anything. If the end brings me out wrong, ten angels swearing that I was right would make no difference.—Lincoln.



## Disc Harrow a Good Tool

Perhaps not as many tools for working the soil have been invented as there have been in other lines of mechanical employment. However, improvement in farm tools has gone on with time, till now we have some of the most complex and economical machinery in use.

The intricate and complex machine is not always the most important machine. Some of the simpler ones do the great mass of necessary work for the world. The hammer and saw are very simple, yet very useful and important tools of everyday life.

The disc harrow and cutaway harrow are relatively late inventions along the line of farm implements. Each disc on the disc harrow works on similar principles to the common plow, yet it is different in a way. The ordinary two-horse or four-horse disc harrow might be compared to a gang plow, and yet the disc harrow and gang plow are constructed to do entirely different kinds of work. Some gang disc plows are in existence, and perhaps in general use in some sections, yet it seems that the "side draft" to the disc gang plow is one element that has never been fully overcome and which works to its disadvantage.

The disc harrow now in common and almost universal use is constructed on principles to eliminate side draft. It is a bilateral machine with an equal number of discs on each side, each set of discs pulling against the other. One of the differences between the spike-toothed harrow and the disc harrow in this respect is that the former works the ground to a level surface, while the latter leaves it ridged. The ridging, however, can be overcome by "lapping half" in working a field, and a part of it can be destroyed by cross-discing. But in any case of single discing, either one or both ways of the field, a surface smoothing must be given with some tool to level the soil.

But the disc harrow is capable of working the soil better in some ways than either the spike-toothed harrow or the turning plow. It cuts, lifts, turns and pulverizes the soil in one process. It is an ideal tool for rapidly stirring up and reducing plowed land that has stood for a long time and grown up into a crop of weeds. It will cut down below the roots and lift out weeds that the common harrow would not affect. It reduces plowed ground deeper than the common harrow. The toothed harrow may be able to make the surface fine, but the disc harrow will make the soil fine and mellow as deep as the plow worked, if enough weight is placed upon it while working. It cuts every large clod into pieces, whether at the surface or below the surface.

The disc harrow cuts and grinds in its working. With sufficient power to draw it and weight to hold it down, the disc tool will mellow up and make fine the rough-plowed field very much better than any other tool that can be used. If you disc your plowed land well when it is not wet, but in a good, workable condition, you are sure of the soil being placed in the finest of shape for seed to germinate and young plants to grow. No large air spaces among colds below the

surface will remain for the feeding roots to enter and die. They will be filled with fine soil and the clods below will be cut and broken so as to allow feeding roots easy penetration in search of plant foods.

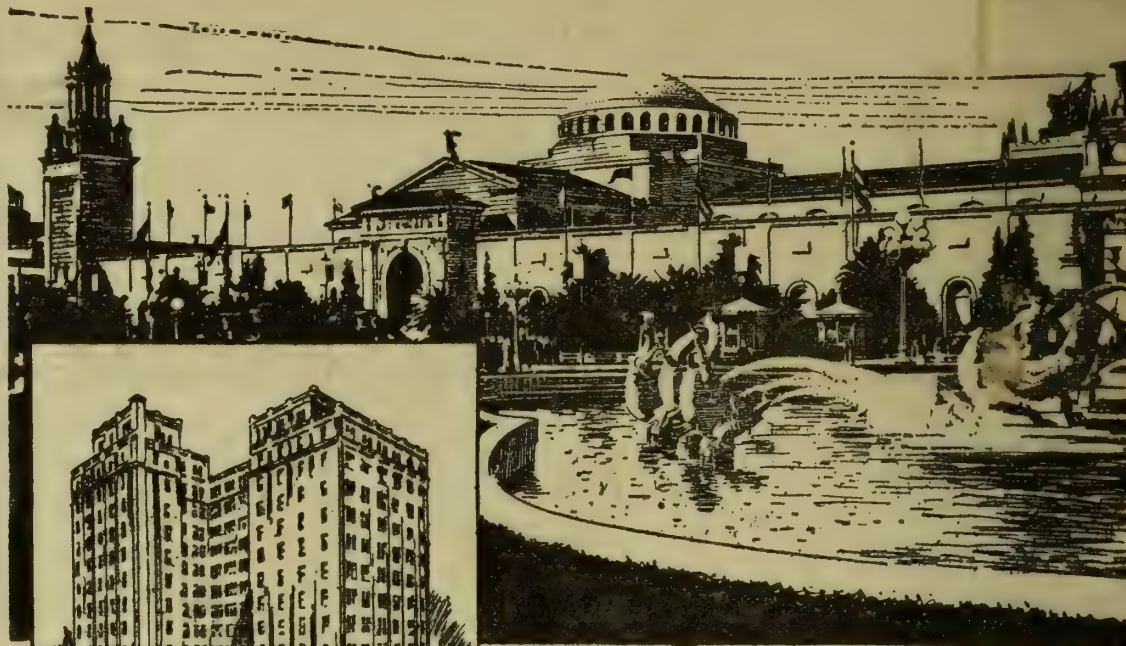
The disc harrow is an excellent tool for the cutting of soil in spring for the seeding of oats, barley and

other very early crops. It is equally good for cutting up cow pea land and similar soil for late seeding of grass or small grain. By weighting down and discing two or three times, reasonably loose soil may be worked as deeply with the disc as with the plow, in less time, and the soil will be fine-grained and ready for seeding

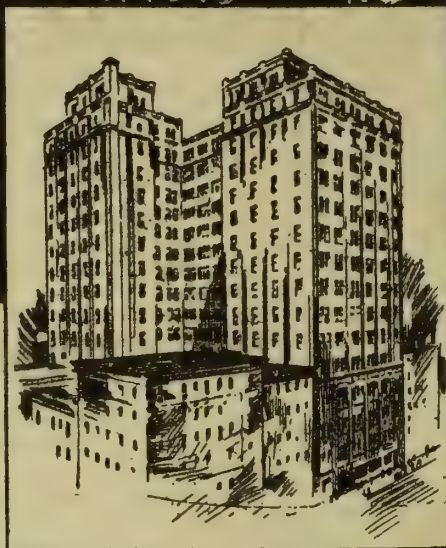
when the work is done. Discing and cross-discing land is the best kind of surface working.—J. S. Woods.

Guest—"As the count bade your daughter faerwell, did you observe in his voice a sympathetic note?"

American Millionaire—"No! I was abserving his promisory note."



The Palace of Liberal Arts at the Panama-Pacific Exposition. It contains the exhibit of the Bell System and is the western terminal of the Transcontinental line.



This Telephone building in New York is the eastern terminal of the Transcontinental line.

## Transcontinental Terminals

**A**MONG the many wonderful things worth seeing at the Panama-Pacific Exposition, which President Hadley of Yale has described as "the most beautiful and inspiring exposition the world has ever seen," the Transcontinental demonstration of the Bell System has won distinction and has been awarded the Grand Prize of Electrical Methods of Communication.

For the first time, perhaps, thousands who have visited the Bell Telephone Exhibit have realized what the wonderful long distance development of the Bell System means to them personally; how it links them to their home interests no matter where they are, and increases the range of their social and business activities.

One of the practical results of this striking demonstration of long distance development will be a larger use of the Bell long distance and toll lines which unite 9,000,000 telephones covering the whole country.

*Your Bell Telephone Makes You the Near Neighbor  
of Your Farthest-Away Fellow Citizen*

## The Mountain States Telephone and Telegraph Co.



ut ag sem

# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region

OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE

VOLUME XII; No. 15

LEHI AND SALT LAKE CITY, UTAH

NOVEMBER 13, 1915



AN IRRIGATION STREAM ON ONE OF OUR LARGE FARMS. SEE HIM POINTING TO THE FIELD OF SUGAR BEETS. THIS IS ONE OF THE FARMERS CASH CROPS. YEAR AFTER YEAR THE BEST ACREAGE IN UTAH HAS INCREASED UNTIL IT IS NOW ONE OF THE BIG CROPS. NEXT WEEK THOUSANDS OF DOLLARS WILL BE PAID AT THE DIFFERENT FACTORIES TO THE FARMERS OF EACH DISTRICT.



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Now we want to go a little farther and make each reader feel like he or she had a material interest in the paper. We want you to feel that it is your paper because we would not amount to much without you and your support. Be free to ask us questions, offer suggestions, and also know that you can be of service to hundreds of others if you would through the columns of the Utah Farmer tell your experience in in farming, how you have made a success, how the home has been made better, the farm or house work made lighter.

We are very careful as to what is published in our columns not only the reading matter but we see to it that our columns are free from deceptive and objectionable advertising. We stand for better farming, better homes and everything that will help to make them. Most any intelligent person can learn how to do a few things well but in a business with so many complications as farming there will be a thousand other things about which precious little is known. Here is where the farm paper can be of some real service. It brings to every reader the best knowledge from time to time that has been discovered by the experiment stations and that has been published by the department of agriculture and other agencies whose business it is to study farm betterment. This is **given** in a short readable way that is helpful to every one interested.

We don't see how any one interested in farming can do without the Utah Farmer. Now is the time of the year when renewals are being made. Send in yours today and help us make the paper render even a greater service than we are now doing. We need your support, your good will and now is the time to show it in a material way by sending in your renewal and suggesting to your neighbor who is not a reader to subscribe. Think of getting over 800 pages of good reading matter about farming, each year for the small price we ask for a year's subscription. The coming year has more good things for our readers than ever before. We know some of your problems and are going to help you solve them. Help us in the work we are doing by sending your renewal today to the Utah Farmer, Lehi, Utah.



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EVERY  
SATURDAY.

# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region.

COMBINED WITH THE DESERET FARMER AND ROCKY MOUNTAIN FARMING.

VOLUME XII.

LEHI, UTAH, SATURDAY, NOVEMBER 13, 1915

ONE DOLLAR

A YEAR.

FOREIGN  
SUBSCRIPTION  
\$1.50

No. 15

## Interesting The Consumer In Good Milk

By Frank H. Bothell, Western Dairy Division.

The demand for a commodity is the governor which regulates the production of the commodity to a great extent. The large quantities of wheat flour consumed and the ever increasing demand for this kind of bread has been the motive power which has caused millions of bushels of wheat to be produced on land which fifty years ago was considered a part of the Great American Desert. The desire for fresh meat, fruit and vegetables in our cities has created a system of cold storage and car refrigeration, which has not alone made these articles obtainable but has also made them a household necessity. Remove the market for these commodities and our dry wheat farms would again become part of the desert and the refrigerator cars and cold storage plants would follow each other to the scrap heap. This one law of demand holds good with milk. Create a market for good milk and good milk will be produced to supply this market.

The creating of a market is of as much importance from the inspectors standpoint as is the securing of a supply and whatever can be done to interest the consumer in good milk is helping the cause of dairy inspection just that much.

Dairy inspection has often been justly criticised for its lack of effort made in securing a market for the grade of milk they are asking the dairymen to produce. It often seems as though they were guilty of trying to secure something for nothing. Improvements are asked, which if made would mean the production of a superior grade of milk, for which the public is not ready to pay. This grade of milk would be no better than the health of the public demand and from this standpoint the inspector is justified in asking for the improvements, as the public health has the first right of consideration. He is not, however, justified to stop there but should do everything in his power to get the public to appreciate the improvement in a financial way. Many a dairyman who is producing a superior grade of milk for which he must ask a few cents more per quart is not realizing any larger net profit from his business than is the dairyman who produces an inferior grade of milk and many such dairies have had to discontinue operations due to the non-support of the public.

To interest the consumer in good milk, is a very different task and one who undertakes it and expects to succeed must have the patience to wait long for results. The apathy and ignorance of many consumers in regard to better milk is exasperating

their only apparent concern being that it contains a large amount of cream and that the price be low. If it has these two requisites it is all they ask. It may be dirty so much so as to be visible to the eye and yet they will not complain, but let the vender increase the price one cent per quart and they will hunt a new milk man. This attitude is not restricted to the uneducated class, as might be expected, but is to be found among those

all there is to be know about milk and the statements they make would be very amusing if the results were not so serious. These people often have more influence with the public than do the better informed, and for this reason they do the cause more harm than good. On a committee appointed by a womens civic league to draft State Dairy Legislation was a lady doctor. At one of their committee meetings pasteurization was under discussion



whose opportunities and education should have taught them to know better. As examples: a physician living in a City where the tubercular test was being applied to all cows furnishing milk to the city, purchased for a family cow an animal which had been found to have tuberculosis and which had been condemned in one of the local herds. He did not know the cow was diseased nor did he take pains to find out. She looked cheap and he bought her. A lawyer in one of western cities was buying milk which has been pasteurized in the bottle, which is considered the best known process of pasteurization. The milk did not sour as soon as the milk he had been accustomed to using and he became suspicious of it and sent the following letter to the dealer:

"Please discontinue delivering milk as we have some of your milk four days old not on ice and it refuses to sour. Enclosed find my check for delivery from July 1st, to 15th, 1913 for \$1.50.

Very truly yours,  
(Signed) JOHN DOE,  
Attorney at Law.

Equally discouraging is the over enthusiasm of others. The assurance that some persons have that they know

and this doctor was very insistant that any pasteurization outside of the city plants should not be recognized as pasteurization. "Why" she exclaimed, "Do you want me to believe all these farmers back in the hills have pasteurization equipment." The product referred to was sweet cream which was pasteurized at the gathering stations prior to being shipped to the cities but this dear lady jumped to the conclusion that it was pasteurized on the farms where the cream was produced. A well posted individual to be drafting legislation for the Dairy Industry. The Doctor had more influence with the committee than others who were better posted and who were trying to obtain sane legislation.

Because this work is difficult is no reason why it should not be done and no inspection is complete which does not expend some effort along this line. In doing this we should keep three essential points in view. First: The benefit to the gain by the use of good milk. Second: Milk must receive care in the home if it is to remain pure. Third: What will govern the consumer in selecting a dairyman who will furnish them with good milk.

The first two of these seem very simple of handling, some think that all that would be needed is to get some printed material, hold a few meetings, put up some pictures and chart exhibits at fairs and pure food shows portraying good and bad conditions on dairy farms, milk plants and the like and the people will get the information needed. But just try it once and see. Call a meeting in your local ward advertising that there will be a lecturer on milk and see what a great number of empty seats will greet you and the persons that will be there are not the ones that need the instruction. Put up a chart exhibit at some fair and from a distance count the people who will stop and look it over, then count for the same length of time the number that will stop to look at the automobile in the adjoining booth or get out some leaflets telling the needs of better milk and distribute them to a crowd at a pure food show and see them crammed into the Jell-O baskets, along with a hundred different adds to be thrown out at the next booth to make room for something else. Do not get discouraged you are educating the people to the needs of better milk.

The material suggested is good. Every part of it would be a benefit to the public if they would but use it. The trouble is that the great majority of people do not think and they go to fairs, food shows and the like to be amused and not instructed. They will take your advice seemingly in good faith but at the very first opportunity will forget all about it and do just the opposite. To illustrate. A better baby contest was being held at a state fair this last fall. In the building where the judging was being done the local Board of Health had placed exhibits of charts and pictures showing how to care for children. One of these charts read as follows: "Do not let baby drink from the common drink cup." Directly under this exhibit was a pitcher of water and a common drinking glass from which parents and babies drank all day. They could drink and read at the same time which was quite a convenience. The exhibit probably done some of the visitors good but it surely exemplifies that the chart and picture method of instruction would not revolutionize the baby question at that fair, at least.

Better milk is not the only subject in which it is hard to obtain the cooperation of the people. Those who are working along other lines of general improvement meet with the

(Continued on page four)



## DAIRYING

### INTERESTING THE CONSUMER IN GOOD MILK.

(Continued from page three)

same lack of interest. This difference indicates to us that we must find some other means of reaching the public's ear. The success of the boys and girls club movement, of this country should give us a clew. While it is hard to get the grown people to take up with new ideas, it is not so with the children. It took the boys corn clubs of the South to demonstrate that corn could successfully be grown there and members of these clubs in other sections of the country are opening their parents eyes to possibilities of which they never dreamed. In Utah, this past year the girls canning clubs, exhibited at the state fair, 1,000 cans of fruits, vegetables and meats put up by girls under 14 years of age and in Oregon over 500 boys and girls attending the district schools are weighing and testing the milk produced by their fathers cows. Think what this means for Utah's homes and Oregon's dairy industry ten years hence. The results cannot be measured. If the children of the country take such an interest in home affairs would not the city children respond in the same way? In most of our city schools instruction in cooking is being given and it is interesting to see enthusiasm of the little girls and their desire to try out in their mother's kitchen what they learn at school. If the Boards of Health would arrange to meet each class once each semester and go over the milk situation with them, demonstrating how to care for milk, what is meant by the different grades and showing them a clean and dirty sample, more actual instructions would be given the parents by the children than all other efforts combined. Many a dairyman the next day after such a demonstration would receive a calling down for delivery of dirty milk, which he would not soon forget.

Before the consumer can be expected to take much interest in good milk, there must be some way for him to know what kind of milk he is buying. In many of our cities there is but one grade that he may buy with any degree of certainty of being treated fair. This grade is certified

milk. Certified milk producers with but few exceptions have honestly earned the place their milk holds on the markets. Certified milk means pure milk and is so recognized by the public. If other grades could be as definitely established there is no question but that the public would take more interest in the quality of milk they are using. As it is today, all milk not certified is without any recognized grade, except that given by the producer and dealer and these grades mean nothing. Take for instance, baby specials, I know of instances where the only difference between baby specials and the other milk sold by the vender, was the cap and price. Pasteurized milk should stand as a definite grade, the same as certified milk, but as it is now used the term means very little. Pasteurization is one of the worst abused words in the milk dealers vocabulary. There are many dealers who are furnishing a grade of pasteurized milk which would be a credit to any City but there are other dealers who are putting out milk as pasteurized, which is pasteurized in name only. Of what value to the consumer is it that milk be marked pasteurized when the name is so abused? This grading of milk must come. The consumer needs it as a guide in selecting their milk man and better dairymen need it to protect their product from unfair competition. This grading must be done by men who know the milk business. It is a dangerous weapon to put in hands of incompetent or unscrupulous men. It means the driving out of business of some dairymen and the making of others. If it is done fairly with justice to all, it will be one of the strongest moves for improvement ever made but if not it will leave a stigma on inspection which will take years to irradicate.

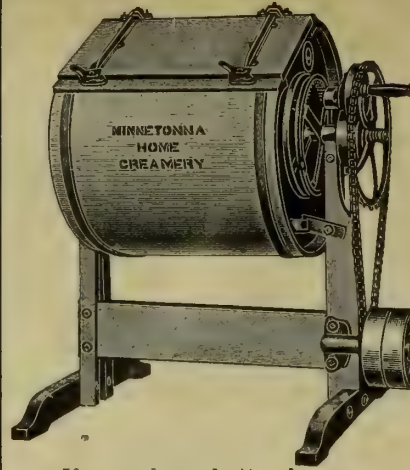
### MILK AS IT IS OFTEN PRODUCED.

J. N. Price.

The dairyman owes it to himself and family and to all mankind, who use dairy products, to strive to handle milk under as clean conditions as he would have other articles of food handled for his use. If we could bring ourselves to think of milk as a food we would, no doubt, be more thoughtful of its care.

A man will curry the horses and feed the hogs, then go into the shed with hair and dust from the horses and filth from the hog pen all over his clothes and hands and, thoughtlessly sit down to milk the cow, that has her side and udder plastered over with manure from sleeping many nights in a filthy stall.

Not having any water handy he milks a few streams on his hands and soaks the worst of the filth loose from the teats. Then, milking a little more on his hands to make them "run easier," he proceeds with the process of obtaining an important article of food from "Old Spot." As he milks, his hands get dry and he wets them again by dipping his fingers into the pail. When he gets through "Old Spot's" teats are polished clean, likewise his hands—on the inside—but between his fingers are black streaks where the filth has lodged and dried



## Do You Churn?

A Minnetonma Home Creamery will make better Butter.

We have a special low price at which to offer you a Minnetonma Plant. More users are wanted. Each user will testify of its goodness. There lies the reason for the special deal.

ONE MACHINE CHURNS,  
WORKS AND SALTS THE  
BUTTER.

If you churn butter become acquainted with the opportunities of a Minnetonma Churn.

**STREVELL PATERSON HARDWARE CO.**  
SALT LAKE CITY, UTAH.  
DROP US A LINE.

as the dirty milk oozed through and dripped into the pail. He carries his pail of milk to the house and strains it away or runs it through an unwashed separator and thinks he has done his duty—if he thinks at all.

Yet this same man will refuse to eat from a plate if he finds a little speck of egg his wife failed to remove when washing the supper dishes the night before.

### SPOILED SILAGE.

Spoiled silage may not seem to injure some farm animals, but it is dangerous to others, and has lost much of its food value for all. The loss results almost entirely from mold, according to C. H. Eckles of the University of Missouri, and could have been prevented, although the only thing to do now is to study what has happened in your silo and learn how to do better next year.

Unless the silo was sealed or feeding was begun immediately after filling, from six inches to a foot at the top is sure to be spoiled. It should be put where it cannot be reached by any farm animals. Lower down, the presence of spoiled silage always indicates the presence of air as the molds which give it the appearance of rotten manure could not work without air. The lack of sufficient water in filling is the commonest cause of the presence of air, but sufficient tramping in an air-tight structure is also necessary. Red mold which sometimes causes alarm is no more dangerous than the less conspicuous forms which often pass unnoticed.

Permanence, rigidity, frost resistance, and cost of maintenance are features to be considered in the selection of a silo.

Some like to feed grain on, or mixed with, the silage while others prefer to feed grain before and silage after milking. The latter practice is to be preferred except in cases where nothing is fed before milking.

### A "SUNDAE" COW

Murphy was bragging about his fine herd of cows.

"Why," said he, "last week one of those cows broke into my hill pasture and she ate so many butter-cups that

**EAR PERFECT TAGS**  
Samples Free  
ATTACHED INSTANTANEOUSLY  
Name and Address. Numbered if Desired.  
LEG BANDS for Poultry, Pigeons, Turkeys  
SALT LAKE STAMP CO. Salt Lake, Utah.

## Reliable Farm Bargains

2 acres on 15th South and 4th East.  
4-room house. Chicken coop. Flowing well. \$165 down and balance like rent. Price complete \$1650.

80 acres one-half mile from Tremonton.  
Is now rented for \$1440 cash per annum. Owner will exchange for a home in Logan as part payment or will sell for cash with a first payment of \$2000. Balance on good terms. This place has a full water right. A new 4-room house, just built this year is also included. Also 4 head horses, 2 sets harness, 1 wagon, 1 white top buggy, mower, rake and sulky plow. Price complete \$13,500. This is a mighty good buy.

40 acres near Tremonton all with full water right in Bear River Canal. One and one-half mile from railroad. Near good roads, good school and in a prosperous built-up farming section. Land is all plowed and levelled. Only \$115 per acre, with ten years to pay. Interest at only 6 per cent. With the new increase in the price of sugar beets, any good farmer can soon become independent on this fine piece of land. Only one-tenth down.

We personally inspect every farm we sell before recommending. This protects you when you buy through us.

We trade farms for city homes.

Phone—Wasatch 963

**Kimball & Richards**

"Land Merchants"

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Salt Lake City, Utah.

Mail your money

It is easy to do business with this solid old bank no matter where you may be.

Drop a letter in the post-box. Uncle Sam becomes the receiving teller or paying teller.

A postal card inquiry will bring full explanations.

**Walker Brothers**  
**Bankers**

Salt Lake City.

Founded 1859. "Courtesy Always."



she has been giving buttermilk ever since."

That looked pretty strong to Flanagan and, not to be outdone, he came back a little stronger: "Why," he said, "that's nothing. Last winter one of my cows had her tail frozen one cold Saturday night, and ever since she's been giving ice cream sundaes."—Exchange.



## LIVE STOCK

### LIVE STOCK FOR IDAHO.

The live stock industry of Idaho has made rapid progress in recent years. Census figures show that the increase in value of all animals in the state from 1900 to 1910 was about 230 per cent. This increase was greater than any other state except North Dakota.

This increase in value is largely due to the increased number of farmers engaged in live stock farming. The change from a system of straight grain farming to one of live stock and grain combined will be a great aid in maintaining the fertility of the soil. Under the former system practically all the plant food used in the growth of the plant is removed from the farm. Under the latter system, the grain is fed to stock and only live stock sold, a large per cent of the fertility remaining on the farm.

The soils of the east have been depleted as a result of continuous grain farming, and the same is true to a less extent in the middle west. The newer lands of the far west must suffer the same fate if we continue selling off all the crops and make no provision for replacing the losses.

Live stock farming makes possible the use of crops that would otherwise be lost or would be sold at a sacrifice. Grain shattering in the field is lost unless there is live stock to pick it up. Oat straw, if fed with high protein feeds is capable of wintering certain classes of stock, but if marketed will bring only a low figure.

Combined live stock and grain farming has many advantages over a system of grain farming. It helps to solve the labor problem by distributing the labor more evenly throughout the year. It also tends to keep up a greater interest in the affairs of the farm throughout all parts of the year. With the many advantages to be derived from live stock farming we may expect to see even greater interest manifested in its development, in this state, and in

the entire northwest, especially that part of it which is now devoted exclusively to the raising of wheat and oats.—C. V. Singleton, University of Idaho.

### FEEDING THE HORSE.

The horse is a very useful and necessary part of the farm's working equipment. Why, then, should it not be treated with as much care and judgment as we spend upon our favorite machine? To feed the horse with no attention to the requirements of ordinary physical necessity to lower the working efficiency of that horse quite as much as the addition of sand to a lubricating oil would gradually, but surely, ruin a piece of machinery. In the latter case we see the immediate effect, while in the former, because nature has provided the live animal with a reserve force, unseen but ready for use, we are apt to overlook the effect of our carelessness until the working value of the animal has been so reduced that we can no longer ignore the change.

With the busy season and the heat combined, the horse begins at once that battle which can result just as the feeder desires. The horse has a small stomach. Then why feed immense quantities of hay when the feed hours are short? Why force the horse to eat three gallons of roughage if there is only space for half that quantity? To distend the stomach and abdomen unduly will reduce the working efficiency of the animal. But, of course, in order to work, the horse must eat. It must eat sufficient food to provide the necessary energy. It would be much better, though, to provide more of this energy through the agency of oats, corn, or similar concentrates than to depend upon hay, even though that hay be alfalfa or clover of the best quality. Of course, some roughage is necessary. Too much grain and too little roughage would swing the pendulum too far the other way and the results would be just as disastrous. A judicious medium will assist the horse in retaining a maximum of energy and condition. This will vary with the horse. Large horses, and small horses, will require different amounts of feed. Differences in individual horses of the same type will also be noticeable. The feeder will have to know his horses just as an engineer knows his engine, and by meeting the needs of the particular animal, will be able to keep it in the best possible condition and at the same time get more work done than would the person who as if all animals were alike. Aim to fortify the horse against the demands of the season.

### Blindness in Horses.

Horses are perhaps more often afflicted with blindness than any other domestic animal, a fact ascribable to different causes, some of which are as follows:—Racks above the mangers in stables, so that the horse has to raise his head to get at the hay; dust, seed, and sharp-bearded grain fall into the animal's eyes, setting up inflammation, and often leading to the loss of an eye; the injurious effect of the pungent vapor of ammonia in most stables and bad lighting. The

use of blinkers and carelessness with the whip, flicking the eye and rupturing a blood vessel, will also cause inflammation and blindness.

### MOST PROFIT IN LIVE STOCK

#### FROM REDUCING COST OF FEED.

By W. A. Henry and F. B. Morrison, University of Wisconsin.

The most important factor of all, for the farmer who must depend on the profits from his stock for his income, is the cost of the ration. In securing a ration which provides the nutrients called for by the standards and meets the other conditions previously discussed, lies a great opportunity for exercising foresight and business judgment on every farm where animals are fed. The wise farmer-feeder will consider the nutrient requirements of his animals in planning his crop rotations. Through the use of grain from corn or the sorghums, legume hay and such cheap succulence as silage from corn or the tions of the country to go far toward solving the problem of providing a well-balanced, economical ration.

The feeds selected for any animal should be such that they will not injure its health or the quality of the product yielded. Feeds which are suited to one class of farm animals may not be adapted to others. Again, a given feed may give satisfactory results when combined with certain other feeds, yet in other combinations it may prove unsatisfactory. A few examples of such conditions are furnished in the following: Cottonseed meal in moderate amount is an excellent feed for cattle, sheep, and horses, yet it is so frequently poisonous to pigs that feeding the meal, as at present prepared, to these animals cannot be advised. While there is always danger from using feeds damaged by mold, such material may often be eaten by cattle when it would poison horses or sheep. Timothy hay, which is the standard roughage for the horse, is unsatisfactory for the dairy cow, and may cause serious trouble with sheep on account of its constipating effect.

Feeding cows a heavy allowance of ground soybeans produce unduly soft butter, while an excess of coconut meal makes the butter too hard. Peanuts and soybeans produce soft lard when forming too large a part of the ration of fattening pigs.

It is often highly beneficial to add wheat bran or linseed meal to the ration on account of their slightly laxative effect. On the other hand, when animals are already receiving such laxative feeds as silage, pasture grass, and legume hay, the use of bran or linseed meal may be unwise.

With the horse and with young ruminants the ration must contain some roughage to distend the digestive tract properly. Furthermore, for the best results the proportion of concentrates and roughage in the ration should be regulated according to the kind and class of animal to be fed and the results sought. Cattle, sheep, and horses can be wintered satisfactorily on roughages alone, if of suitable quality. Even brood sows may be maintained chiefly on legume hay, when not suckling their young. In the rations for growing and fattening animals and those at work or in milk, a considerable part of the ration should consist of concentrates.

## Sugar That's Good and Pure

When you open a sack of Utah-Idaho Sugar, you are at once impressed with its purity by its snowy whiteness and crystal clearness.

Utah-Idaho Sugar is made in clean, sunlit, fresh-air factories, right here in the West, and is the equal of any sugar produced in the world.

Its goodness can only be appreciated by its use. For jelly making, preserves, putting up fruit, cooking, candy making, etc., it cannot be surpassed.

Buy it from your grocer by the sack. Be sure you say—



### GROUND VS. WHOLE GRAIN

#### FOR LIVE STOCK

It is somewhat doubtful whether the grinding of corn for some classes of live stock is worth the labor and expense involved. Tests conducted for ten years at the Wisconsin Experiment Station showed an average increase in gains of about 6 per cent from grinding corn for hogs. The results for individual years ranged from 11 per cent loss to 18 per cent gain. The Iowa station has also done considerable work in testing various methods of preparing corn for hogs, and found that while grinding showed a slight increase in the feeding value of corn for older hogs, such gains did not begin to pay the cost of shelling and grinding. Soaked shelled corn showed to much better advantage than the corn meal, and also proved somewhat better than the dry ear corn.

It was a question however whether the difference in feeding value paid for the labor of shelling and soaking.

It is advisable to grind small, hard grains as kafir, milo, barley, rye or sorghum seed, as otherwise a large proportion of the feed may not be digested.

Ground oats for horses have not shown any great advantage over whole oats, except in the case of horses that are at very hard work or have defective teeth. Grinding oats for hogs, however, will increase their feeding value from 20 per cent to 30 per cent, since the hog is not able to digest the whole grain to advantage.

As much as 25 per cent of whole corn may remain undigested when fed to cattle. Unless hogs follows the cattle in the feed lot, it is therefore desirable to grind the corn to prevent this waste. Sheep will handle whole grain to much better advantage.—Chas. I. Bray, Colorado A. C.

## Three Carload of Feeder Hogs For Sale

Good thrifty pigs, weighing from 70 to 125 pounds each. A chance for some one who wants to feed hogs this winter.

For prices and other details

**S. M. WOOLF**  
Metropolis, Nevada.



## Field and Farm

### IMPORTANCE OF SEED

#### SELECTION.

The seed contains the germ of the new plant. The new plant is likely to be no better than the plant from which the seed came. If it is better than the parent plant it will be because it has a better chance—plant food and cultivation.

If the seed is good to start with, then we feel encouraged to give the new plant the proper environment. We have a good start toward crop improvement.

The first thing in seed selection is to keep the variety pure. How many fields of wheat or corn or oats or any other crop have you seen that were pure in variety? It is impossible to keep the variety pure without careful selection.

The second thing in selection is to get well-matured, strong, healthy seed from plants of the right type that are good producers. Weak and diseased seed are worthless. The crop from such is bound to be poor.

The third thing is to care for the seed that has been selected in such a way that will produce good germination when it is planted. It would make no difference how good the seeds were at selecting time if they were not properly cured out and kept in good condition during the winter. If they are not thoroughly dry when they are sure to lose their vitality. If they are not thoroughly dry when freezing weather sets in, the frost will surely injure them.

Remember then that good seed should be pure as to variety, sound as to quality and strong as to vitality. Only good seed sown in good soil and given the proper amount of moisture and cultivation can produce a good crop.

#### How to Select Seed.

Only general rules can be given here. To give specific instructions on seed selection each crop will have to be named. The list is too long to mention now.

The proper time and place for seed selection is when the seed part is ripe and on the plant before it has been injured by frost or wet weather or other misfortune. This should be right in the field where the whole plant can be studied with all its surroundings. The seed is only a part of the plant that produced it, hence you must know the whole plant.

Then too, you must have in mind a standard of the type and quality of the plant you wish to produce and select the parents as nearly like that type as possible. This is where the man with a keen insight and quick perception who has some knowledge of plant life gets the advantage over the one who has given the subject no thought. But every man can learn how if he persists and keeps on selecting. Any man will select better seed from the field than he will from the sack, bin or crib after good, bad and indifferent has all been piled together. The thing is to start selecting from the field and keep it up till you have formed the habit. By that time you will see enough good results that you will never quit it.—New Mexico Experiment Station.

### CULTIVATE THE

#### SUMMER FALLOW.

The object of summer fallowing wheat land should be the retention of moisture and the formation of plant food, and unless this is accomplished summer fallow is a failure.

Food is prepared for the future wheat crop by the action of micro-organisms. These are active only when the soil is moist, so that cultivation to retain moisture is of first importance.

A large field of wheat stubble near this institution was ploughed last spring while the ground was in ideal condition but was not dragged. Discing or dragging immediately after ploughing, followed by a dragging after each rain, would have retained most of the moisture and resulted in the production of large quantities of nitrates and other plant foods. At this late date an attempt is being made to pulverize the clods with a disc but it rattles along much as it would over a stone heap. A rain may put enough moisture into the soil to sprout the wheat but the warm weather which favors the action of nitrate producing organism is about at an end for this season. This field is in no better condition for the production of a crop of wheat after summer fallowing than it was a year ago.

It is safe to predict that next season's yield of wheat on this field will be reduced a number of bushels per acre because the bacteria did not have conditions favorable for the production of nitrates and other plant foods.

Follow the plow with the harrow or disc so that moisture as well as plant food may be present in sufficient quantities to sprout and grow fall sown wheat.—W. R. Wright, Idaho Station.

#### FOR PAINTING BUILDINGS

For the benefit of those who may want to paint their building with different tints or shades, the following suggestions will be helpful:

Red and black make brown.  
Lake and white make rose.  
Red, blue, and black make olive.  
White and brown make chestnut.  
White, blue, and lake make purple.  
Blue and lead color make pearl.  
White and carmine make pink.  
Indigo and lampblack make silver gray.  
White and lampblack make lead color.  
Black and Venetian red make chocolate.  
White and green make bright green.  
Purple and white make French white.  
Light green and black make dark green.  
White and green make pea green.  
White and emerald green make brilliant green.  
Red and yellow make orange.  
White and yellow make straw color.  
White, blue, and black make pearl gray.  
White, lake, and vermilion make flesh color.  
Umber white, and Venetian red make drab.  
White, yellow, and Venetian, red make cream.  
Yellow, white, and a little Venetian red make buff.—Western Farm Life.

# 5 instead of 25

If we were to pick out only one point in the Caterpillar Tractor, to show the improvement in the new models, it would be this:—5 pieces in the track unit where there were 25 three years ago—less wear, no waste of power, longer life.

If we were allowed only one argument to put up to a Caterpillar prospect, it would be the argument of quality—of right design—of best grade material and workmanship—of "stand-up-iveness."

The Caterpillar has been 10 years in the field—10 years to be tried in—10 years to be improved in.

We're looking for some good live tractor prospects to let loose some of our enthusiasm on. If you're the man drop us a line—ask for Bulletin E 311.

## The Holt Mfg. Co.

(Incorporated)

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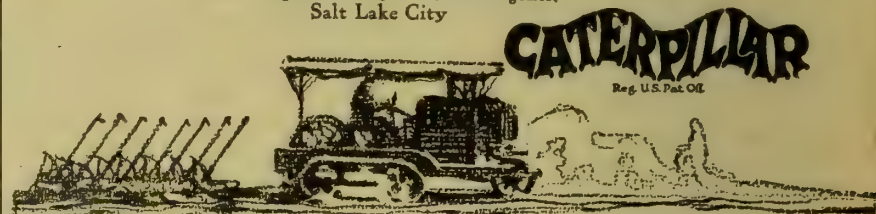
Portland, Ore.

Stockton, Cal.

Peoria, Ill.

Cons. Wagon & Mch. Co., Sales Agents,  
Salt Lake City

Ask about our Caterpillar school—free if you order now.



### SAND.

(Some old lines, but always interesting.)

I observed a locomotive in the railroad yard, one day,  
It was waiting at the roundhouse,  
where the locomotives stay:  
It was panting for the journey, it was  
coaled and fully manned,  
And it had a box the fireman was filling  
full of sand.

It appears that locomotives cannot  
always get grip  
On their slender iron pavements cause  
the wheels are apt to slip:  
So when they reach a slippery spot,  
their tactics they command  
And to get a grip upon the rail, they  
sprinkle it with sand.

It's about this way with travel  
along life's slippery track—  
If your load is rather heavy and you're  
always sliding back:  
If a common locomotive you completely  
understand,  
You'll provide yourself in starting,  
with a good supply of sand.

If your track is steep and hilly and  
you have a heavy grade,  
And if those who've gone before you  
have the rails quite slippery made,  
If you ever reach the summit of the  
upper tableland,  
You'll find you'll have to do it with a  
liberal use of sand.

If you strike some frigid weather and  
discover to your cost,  
That you're liable to slip upon a  
heavy coat of frost,  
Then some prompt decided action will  
be called into demand,



### YOUR HARNESS OR YOUR LIFE!

Make your harness safe by using

## EUREKA HARNESS OIL

It strengthens and livens the leather.  
It is harness insurance. It adds new  
life to old harness. It keeps new  
harness new.

Dealers everywhere

THE CONTINENTAL OIL CO.  
(A Colorado Corporation)



And you'll slip 'way to the bottom if  
you haven't any sand.

You can get to any station that is on  
life's schedule seen  
If there's beneath the boiler of am-  
bition's strong machine  
And you'll reach a place called Flush-  
town at a rate of speed that's grand,  
If for all the slippery places you've a  
good supply of sand.



# The Liquid Part of the Soil

Agricultural Lesson XIII.

Prof. J. C. Hogenson.

This consists of water and the soil solution. The uses of water are, 1st, a food for plants. It is one of the most essential compounds to plant growth, being the most abundant substance in plants. Growing plants range from 70 per cent to 90 per cent water, while in air dry plants we usually find from 4 to 10 per cent. Water is used also as a carrier of plant food from the soil to the plant tissues. The mineral plant foods are dissolved in the soil water which is taken into the plant and then carried to every part of the plant. Much of the water used as a carrier of plant food is transpired from the leaves of the plants. When we consider that it takes from 300 to 1200 pounds of water to produce one pound of dry matter we begin to realize the amount of water that must be used and caused to pass through a plant to allow full and complete development.

The sources of water used by plants in the soil are, rain, snow, dew, irrigation and capillarity. The amounts in the soil at different times of the year depend upon the available supply and the capacity of the soil to hold water, which in turn depends upon its texture, structure and the per cent of organic matter which it contains.

The rate of loss of water from the soil is determined by the kind, the physical condition, and the way in which it is handled. The maximum water content is the largest possible amount which a soil will hold without allowing any to run off. It ranges in different soils from 30 to 50 per cent. The minimum water content of a soil is reached when plants begin to wilt, and ranges from 4 per cent in sand to 11 per cent in clay. The optimum water content of a soil is that which allows a perfect working of the soil without breaking down its texture and when it is in the best possible condition as to moisture for plant growth. A soil is saturated when all of its pore space is filled with water. Water, as we know is found in the soil in three forms, free or gravitational, capillary and hygroscopic. Free or gravitational water is found in cultivated soils only immediately after a rainstorm or immediately after irrigation water has been applied, and may then completely fill the soil pores. Capillary water surrounds the soil grains and is held by the soil grains and cannot be used by plants. More capillary and hygroscopic water is found in small grained soils than in coarse grained ones.

## Movements of Soil Water.

The moisture which is found in the soil is subject to three types of movement: 1st, Gravitational, 2nd, Capillary, 3rd, Thermal. When rain falls upon the soil or it is being irrigated, one portion of the water begins to flow downward through the pore spaces urged by the pull of gravity; a second portion increases the thickness of the water films surrounding the soil grains and root hairs, while a third portion is returned to the air through evaporation caused by heat. The amount of water pulled downward by gravity depends upon the

texture of the soil, being much less in fine textured soils than in coarse ones or sands. The capillary movement of water is due to surface tension and is much greater in a clay soil than in a coarse soil because of the finer tubes or pore spaces. Capillary water will not rise to as great a height in a sandy soil as in a clay soil because of the large capillary tubes. It will, however, rise faster for a distance in the sandy soil than in the clay owing to the less obstruction which it encounters. In six-inch cylinders with their surface only 11 inches out of water the length of time required for the surface to appear damp was:

- 2 days for fine sand.
- 6 days for sand and clay.
- 6 days for clay loam.
- 18 days for clay.

If the tubes were lengthened to four feet, however, the water in the clay tubes would reach the top first and in the sand last. King claims that water will rise in sand 20 feet while clay will draw the water at least 35 feet.

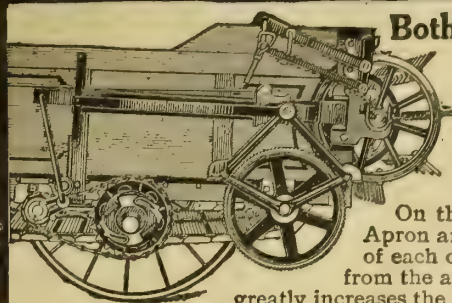
Capillarity is greater in wet soils than in dry soils because when soils become dry they act as mulches and do not attract the water molecules nor allow them to pass through. The movement of water in the soil is very important and is continually going on both in a lateral direction mostly toward the plant roots and drains and also in a vertical direction by capillarity and gravity. The amount of water moved by capillarity depends upon, 1st the water content of the soil (the more there is in the soil the stronger will be the capillarity, 2nd, the temperature of the soil and surrounding air, (the higher the temperature the greater the capillarity). 2nd, the number of plant roots drawing upon soil water.

## SHARE RENT PAID BETTER.

Even now tenants and owners are making their rent plans for next year. The terms and conditions of the contract should be very carefully considered by both parties for a wrong agreement may mean a loss to both. Figures gathered on 669 farms in a farm management survey in northwest Missouri by O. R. Johnson, of the Missouri Agricultural Experiment Station, show that the average tenant in the area surveyed made \$138 greater net income than the cash tenant, and that a share of the crop paid the land owner 1.3 per cent higher interest on his investment than was received by the owner who rented for cash. The total net income of the average tenant who rented all his land on share basis was \$548, the owner receiving 4.9 per cent. While the cash renter made \$410 and paid a renter which turned the owner 3.6 per cent. The tenant who rented his crop land for a share and his grass land for cash made a net income of \$507 and the owner received 5.9 per cent of his investment.

The land owner is better able to bear all or part of the risk of flood or drought than the average tenant, and the share rent plan throws part of the risk upon him, while the cash rent plan throws all of the risk upon the

# Flying Dutchman Low Down Spreader



**Both Apron and Beater Take Power Direct from Axle**

Look at other endless apron spreaders. See how the apron is driven from one end of the Beater? That wastes power and puts an awful strain on the Beater.

On the Flying Dutchman Spreader the Apron and Beater are entirely independent of each other. Each takes its power direct from the axle. You can readily see how this greatly increases the power and lightens the draft.

## Lightest Draft Low Down Spreader

**Beater driven by one wheel—Apron by the other.**

You do not waste half of your traction power as you do when you drive entire machine from one side of the axle. Then, there's the great advantage of simplicity.

**Entire Machine is operated by ONE lever.**

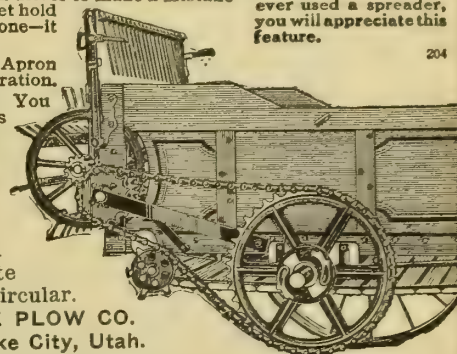
There is no chance for an inexperienced driver to make a mistake and damage the machine. He cannot get hold of the wrong lever—for there is only one—it operates both Beater and Apron.

It is positively impossible to start the Apron until after the Beater has been put in operation.

The range of adjustment is very great. You can spread any amount from 4 to 28 loads to the acre. And in addition there is a reserve speed of over 40 loads—which quickly cleans out the last part of the load.



Ask your nearest dealer to show you this spreader or write us for descriptive circular.  
**WESTERN MOLINE PLOW CO.**  
Dept. 79 Salt Lake City, Utah.



Whether the Flying Dutchman is in or out of gear, it is securely locked in that position. It cannot possibly change until you move the lever. If you have ever used a spreader, you will appreciate this feature.

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tenant if he is financially responsible. If not, the owner may lose part or all of his rent but he usually takes no further risks.

Land continuously rented for cash is found to be more rapidly exhausted than the farm operated by the owner or rented for shares.

Cash crops must be relied upon much more exclusively by the amount and must pay a fixed cash rent as securing money for use in paying store bills.

As the country grows older cash rent will probably become more prevalent and desirable. We may perhaps approach the present condition of England where the tenants are wealthy enough to stand a bad year or two without becoming bankrupt. Their long leases running for fifteen or twenty years give them good opportunities to balance up bad seasons with good ones. Besides this, the fact that the owner takes a large share of his income in the form of social prestige attached to owning land and the renting and other privileges connected with it enables the tenant to get it for a cash rental amounting often only to two per cent of the owner's investment.

A girl was complaining to her chum of the way her "young man" was treating her.

"Speaking of presents, why don't you give him the mitten?" the friend asked.

"It isn't a mitten he needs, it's a pair of socks; he's got cold feet."

## Fall Rye

and

## Turkey Red Seed Wheat

LOWEST PRICES

**Vogeler Seed Company**

SALT LAKE CITY, UTAH.

## SEEDS

FOR FALL PLANTING

Rye, Turkey Red Wheat, Vetch and other Farm Seeds

DON'T FORGET THE FLOWER GARDEN Ask for Free Fall Bulb and Seed Catalog.

**PORTER-WALTON CO.**  
Salt Lake City.

For success in raising horses it is necessary to pick out a breed and stick to it. Avoid crossing with others.





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#### OFFICIAL ORGAN

Utah Horticultural Society, Utah State Dairymen's Association, Utah State Bee Keepers' Association, Bear River Valley Farmers' Protective and Commercial Association, Agricultural College Extension Department and Utah State Fair Association, Utah-Idaho Millers' and Grain Dealers' Association, Utah Fruit Growers Association.

#### OUR GUARANTEE

We guarantee every subscriber against loss thru dishonesty or attempted swindle by any advertiser in this publication. We do not attempt, however, to adjust trifling differences between the subscribers and honest, responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within thirty days from date of the transaction, and the subscriber must have mentioned Utah Farmer when writing the advertiser.

Now is the time to renew your subscription to the Utah Farmer. Help us by sending your remittance today.

There seems to be a great deal of interest in Utah in the dairy business. Some are learning that there is a profit to be made in producing milk on the farm.

#### BRIGHT OUT LOOK.

There seems to be a bright outlook for the farmer and stock raiser. The future gives encouragement for the man who tills the soil. Every available foot of land should be put to use the coming year, should be producing something. Every mare should be raising a colt, every cow a calf. To make the greatest profit much will depend upon your planning, the kind of crops you produce and the way you market it, whether on "four wheels or four feet."

One of the national trade and finance journals had this to say in their last issue:

Though a full measure of recovery is not yet apparent in every branch of domestic enterprise, evidence of returning prosperity are multiplying throughout the commercial world. Of late, the constructive movement has swung forward with a rapidity seldom equalled, and in some respects recent developments are wholly lacking in precedent. Pronounced expansion in the volume of transactions and a further growth of optimistic sentiment featured the month just ended, when

several new high records, including those of both production and distribution, were established.

#### USE THE SCRAPS.

Our farmers can learn a lesson from the great packing companies, and other big concerns, how they are making money by using up the scraps. If the great oil companies can break even on coal oil and keep their various factories going, see what a profit can be made out of their by-products such as paraffine and others. Every once and a while we learn of some new product that is being made by the great packing companies. They have learned to utilize the "scraps."

There is a great difference to the farmer who makes silage of his corn, rather than to feed the ears and let the stalks waste in the field or barn yard. Let sheep eat the weeds and other roughage. Every farmer must work out the problems on his own farm. To be successful he must use the "scraps." Often he can balance a ration of unsalable by-products and feed them on the farm to hogs, sheep or cattle. In working out this problem he is sure to increase his profits.

#### UTAH PRODUCTS' WEEK.

In order to emphasize the industries made possible by our natural resources and advantages, a week has been set apart, and will be known as Utah Products' Week. The Governor will issue a proclamation calling attention to the wonderful state in which we live, and ask the people to take part in making the week a success. The week begins on Sunday, November 14th. All ministers of the gospel have been asked to take as a theme for their sermons on that day something appropriate, acknowledging the many blessings we enjoy in this great state of ours. On Monday, and during the remainder of the week, talks will be made to the school children about our resources and industries. Merchants are expected to make displays of homemade goods in their stores and windows. Commercial Clubs and other civic organizations will hold meetings, and give banquets during the week. At the factories talks will be made to the men who are working in them, suggesting that they always buy homemade goods. Many other methods and ways are being employed to remind the people of the state that they should buy Utah products. Next week there should be such a getting together of the home producer and home consumer as will materially increase the local demand for Utah products. The Utah Manufacturers' Association is back of the movement, and judging from their past efforts, Utah Products' Week will be a great success.

#### CHEERFULNESS.

We should always find something to do to scatter sunshine where it is dark and gloomy. A pleasant word, a smile or a hearty greeting will make some one's path way brighter and in so doing you bring joy to yourself.

There is none burdened so heavy but some pleasure may be gained in life. Never shut yourself in with your troubles, we will see our mistakes sooner or later, then sunshine will come again.

It is our duty to be cheerful, less we rob others of their pleasures. The greatest happiness comes from making others happy. We owe it to ourselves, to our family and neighbors to be cheerful. There is no advantage to be other than cheerful and there is pleasure and profit in cheerfulness.

#### THE BIGGEST BUSINESS IN

#### UTAH IS FARMING.

The Utah Agricultural College says that the farming business in Utah is worth \$200,000,000 and suggest that it is vitally necessary that the investors in so gigantic an enterprise meet once, at least, each year to consider its large features.

Each year the interest has increased in the Farm and Home Conventions ("Round-Up"), and in order to make them just as helpful as possible the Extension Division is sending out circulars and a number of questions that should be answered to help those in charge to arrange these conventions so they will do the greatest good.

Here are a few of the problems that concern us: What about fruit under our present market conditions? Can we double our irrigated area without using any more water? From what depths can underground water be pumped profitably? Are we living up to our possibilities as a producer of dairy products, milk, cheese and butter? What can be sold profitably from Utah farms? What should we not raise beyond the demands of the local market? Is our Utah social life degenerating or can we still claim now and look forward in increasing perfection to the most perfect social scheme in the world? Can Utah become a great beef and sheep fattening state making such enormous profits in this business as Colorado and other nearby states? Or can we only range feed beef and mutton, leaving the extra profit and business to others? The sugar business, do we need more beets and better tillage.

Why does one farmer make each year \$2500 after paying all expenses, keeping his family and paying interest in his investment of \$15,000, while another farmer under the same conditions and with the same investment makes \$150? What should a successful, progressive farmer pay in interest for money borrowed to improve his farm? Can we eliminate the "scrub" from our live stock?

What about the new facts regarding health and disease prevention, the nutrition of the young and the mature, economy in the preparation of foods, labor saving devices, scientific arrangements in the home, model kitchens, canning and preserving, new and valuable food combinations, nursing, business management of the home, proper serving of meals, home libraries, home pictures and home decoration, proper and improper dressing, good and bad color combinations in dress, social hygiene, and vocational guidance.

In considering the above questions remember that Utah is a state bounteously rich in latent agricultural wealth—blessed far beyond our power to appreciate—and is the geographic and business centre of the intermountain empire.

Now the Utah Farmer suggests that you answer the college and tell them which of the subjects you would like to hear discussed at the coming conventions, to be held in different parts of the State, give them your opinion and do it right away.

The Agricultural College and the men and women who are working for it are the servants of the people of this state because the college belongs to the people of this state. Why not help them to help us? Lets work together and make Utah a leader in the world in building up a rural life on high ground of intelligence, morality, social cleanliness and business efficiency.



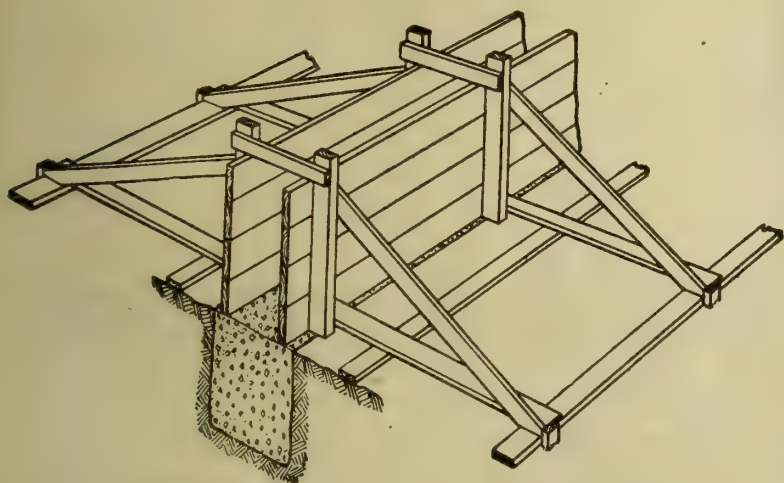
# Simple Concrete Wall Construction On the Farm

Concrete walls are easily constructed and at low cost. These walls are especially suitable for farm enclosures or enclosures about farm buildings. Where merely serving the purpose of an enclosure, such as a barnyard or poultry yard, it is not necessary to construct the wall more than 6 inches thick. Simple methods of construction are as follows:

The most important consideration in the construction of any wall is a firm foundation, sufficiently deep to prevent heaving by frost. In most localities this distance is 3 to 4 feet. When the earth is firm and the sides of an excavation will stand up vertically, it is unnecessary to use

that a smooth surface will be obtained in the finished wall. This result is obtained by spading the concrete as it is being placed in the forms. Spading consists of thrusting between the form and the fresh concrete a thin wooden paddle. This serves to force the stone back into the concrete, allowing a rich mortar coat to flow against the forms. In walls above ground it is well to reinforce with small steel rods or wire mesh. This reinforcing runs in both directions and serves to prevent any cracks due to settlement or other causes.

Walls for building can be constructed as described, but for building of considerable size the thickness of the



Simple Form Construction for Concrete Walls.

wooden forms for the portion of wall beneath ground level. A trench of the required width is dug, taking care that the sides of the trench are straight, vertical and fairly smooth. The width of all walls below ground level should be at least 12 inches. Where sandy or crumbly earth is encountered, it is best to use wooden forms below ground level. In depositing the concrete in the foundation trench see that no dirt falls into it as this would weaken the wall. The proper proportions for walls below ground are 1 bag of Portland cement to 2½ cubic feet of sand to 5 cubic feet of crushed rock or pebbles. When the trench is filled with concrete to ground level, a simple form, as shown in the drawing, is set in place. The surface of the foundation at ground level must be entirely free from dirt, chips or other foreign substances and the concrete roughened before depositing upon it the above-ground portion or wall proper. The minimum thickness of walls for very light structures may be 4 inches, although it is very difficult to deposit concrete in a wall this thin. A thickness of 6 inches is better for most purposes. The proportion of walls above ground should be 1 bag of Portland cement to 2 cubic feet of sand to 4 cubic feet of crushed rock or pebbles. Bank-run gravel may be used if the pebbles are separated from the sand by screening through a ½ inch screen. For the above-ground portion of walls the forms should be made with care, the boards being carefully matched so

walls should be 8 inches, and one or two lengths of rods should be laid about 2 inches above the tops of windows, doors and other openings.

## LAYING CONCRETE IN COLD WEATHER.

Can concrete be safely laid in freezing weather? Does freezing injure new concrete?

There is no doubt that some of the poor concrete is evidence in almost every locality is due in part to freezing. But concrete engineers tell us that concrete can be handled in freezing weather with no damage and is handled successfully in every large city in cold weather.

Concrete apparently is injured if allowed to freeze before taking its final set. This means that concrete must be kept from freezing for twelve to thirty-six hours to be on the safe side. After this period freezing delays but does not prevent hardening or thawing out. Earlier freezing is very apt to roughen troweled surfaces and loosen finish coats.

Freezing is delayed as prevented by warming the material before mixing and by covering the new work so as to retain the heat added to materials and the amount generated by the cement in setting. Salt is added by engineers to the water used for mixing but the layman probably should not add it without becoming fully informed in its use.

So, while concrete is laid in freezing weather where necessary or the additional expense is warranted, the

farmer had best make the most of what warm days remain or wait till spring.—E. W. Hamilton, Idaho Experiment Station.

## THE FARM INVENTORY.

G. S. Ray, Idaho Experiment Station.

An inventory is regularly taken by all good business concerns. Since the farm is as much of a business concern as is the store or the factory, the inventory is essential to the farmer's business.

An inventory should show all resources and all liabilities. Resources include real estate, live stock, equipment, feed, supplies, cash on hand bills receivable; in fact, anything of value to the farmer. Liabilities are notes payable; accounts payable, mortgages, etc. The difference between resources and liabilities will give the farmer's net worth. If an accurate record of these various items is taken once each year, the farmer will be able to see how much has been made, or how much lost during the year. For example, let us suppose that an inventory taken January 1, 1915, shows a farmer's net worth to be \$2300.00. If on January 1, 1916, his inventory gives a net worth of \$2500.00, the farmer has made \$200.00 during 1915.

The usual time for taking an inventory is when there is the smallest stock of material on the farm. This is generally some time during the late winter or early spring. January 1st, however, is a very convenient time. If taken on or soon after the first of the calendar year, it will not interfere with spring work and will also show the farmer what materials are needed for the coming season.

The following is a suggested outline for a complete inventory:

- A. Resources.
  1. Real Estate
    - a. Land
    - b. Buildings
  2. Live Stock
    - a. Horses
    - b. Cattle
    - c. Hogs, etc.
  3. Equipment
    - a. Major  
Heavier farm tools
    - b. Minor  
Smaller farm tools.
  4. Feed
    - a. Farm Produce
    - b. Purchased feed
  5. Supplies  
(Things kept on hand to be used at any time.)
  6. Growing Crops
  7. Manure and Fertilizers
  8. Bills receivable
  9. Cash on hand
- B. Liabilities
  1. Bills Payable  
(Accounts, notes, mortgages, etc.)

## WORLD'S HARVEST CALENDAR

Somewhere every month in the year harvesters are clicking. The world's schedule for cutting grain is as follows:

- "January—New Zealand, Argentina.
- "February—East India, upper Egypt.
- "March—Egypt, Chili.
- "April—Asia Minor and Mexico.
- "May—Asia, China, Japan, Texas.
- "June—Turkey, Spain, southern United States.
- "July—United States, Austria, southern Russia, England, Germany, Switzerland.



# Keep Sickness Away With Dry Feet

By The Oil Philosopher.

You can keep your feet warm and dry and prevent a lot of sickness, by applying, each week, a small amount of Duck-Back Shoe Oil to your shoes.

Put it on new shoes, old shoes, light shoes, heavy shoes. It contains no harmful chemicals—just natural leather oil which leaves a gloss and softness that should always be on shoes.

# Duck-Back Shoe Oil

adds comfort, makes shoes last longer and gives them a good appearance.

Go to your dealer today and buy a can of Duck-Back Shoe Oil to insure your family against wet feet and resulting sickness, this winter. If your dealer should be out of Duck-Back Shoe Oil, write the Utah Oil Refining Company, Salt Lake City, and it will see that you are supplied.

"August—Canada, Holland, Belgium, Denmark, Poland.

"September—Scotland, Sweden, Norway, Siberia.

"October—Northern Russia, Siberia.

"November—South Africa and Peru.

"December—Uruguay, Australia.

"Then it all starts over again, beginning with New Zealand and Argentina.

## THROWING HIS MONEY AWAY!

Druggist. "How did you find those camphor balls for the moths?"

Customer: "No good at all. I a' at them, but couldn't hit one!"



## THE HOME

### OVEREATING AND FOOD VALUES.

The statement is being made on all sides that people eat too much. This is leading a great number of people, who would like to be hygienic in a dietetic way as well as bathtubwise, and fresh air careful, to ask what is too much. This is not easy to answer in terms of weights and measures, since one ounce of one food may give as much nourishment as sixteen of another.

Food is not like money. The basis of weight or the more complex measurement of calories of food cannot be such hard and fast measures as a dollar or a cent. There are no rules of thumb to save us from the trouble of learning many things about foods and their effects upon human beings. Food is organic stuff.

But since some form of measurement must be resorted to in order to approximate a desirable condition, we have in the army (under peace conditions) each man receiving twenty-eight ounces of bread and meat daily. But serious diseases have been common in army and navy where food was doled out by weight, because of lack of variety and defect in quality.

By using the best quality of food, with much variety, it has lately been proven that a very small quantity may be sufficient. Scientists proved it a dozen or more years ago, and last year Mrs. Thomas Edison was quoted as saying that she and her husband, long noted for his abstemiousness while doing concentrated and productive thinking, had lived for two years on ten ounces of food a day.

If the amount of energy Mr. Edison saves for productive work by releasing it from the everlasting task of turning over more food than his body can utilize could be represented graphically, the world would stand agape at the sensational fact. But the most of the world overworks its digestive organs and then tries to get them mended in hospitals and other homes of misery.

### SCHOOL LUNCHES.

(1) Brown bread and butter sandwich, ham sandwich, apples, and water or milk. (2) Cottage cheese sandwich, bread and butter sandwich, apple sauce, and a bottle of lemonade. (3) Deviled eggs, stewed prunes, nuts, bread and butter sandwiches, and a bottle of milk. (4) Chicken sandwich and jam sandwich, a small slice of pickle, an apple, and a small piece of cake with some crackers and apples thrown in for recesses. (5) Beef stew, cookies, apples, lettuce or plain bread and butter sandwich. Meat substitutes are used instead of meat in some of these lunches and celery or other similar appetizing food may be added if it is available.

### HONEY CANDIES.

Chocolate caramels: One pint of sugar, one pint extracted honey, (or sorghum),  $\frac{1}{4}$  pound grated chocolate,  $\frac{1}{2}$  cup sweet cream. Try often, while it is boiling, by dropping a small portion in cold water. When it will form a soft ball. Pour about  $\frac{1}{4}$  inch thick on greased tins.

Walnut creams: Boil to hard snap stage one cup grated chocolate, one cup brown sugar, one cup extracted

honey (or sorghum),  $\frac{1}{2}$  cup sweet cream. When it hardens on being dropped in water, stir in butter the size of an egg. Just before removing from fire add 2 cups of finely chopped walnuts stir thoroughly and pour on buttered plates to cool, cutting it into squares. Other kinds of nuts may be substituted for walnuts.

Butterscotch: One cup of butter, 2 cups of sugar, 2 cups of extracted honey (or sorghum), 1 heaping teaspoon cinnamon. Boil ten minutes, pour into a buttered pan and when cold cut into squares.

Cracker Jack: One cup brown sugar, 1 cup extracted honey (or sorghum). Boil until it hardens when dropped into cold water. Remove from stove and stir in  $\frac{1}{2}$  teaspoon soda. Stir in all the popcorn it will take, spread on greased tins and mark in squares.

### THE COMMON WASH RAG.

The United States Public Health Service and the various State and local boards of health have taken adequate measures for the abolition of that distributor of disease germs, the common towel. Now comes the news that the common wash rag is even a greater menace to health. The hotels and public hosteleries have recognized this for some time and have supplied their guests with sterilized wash cloths in individual sealed packets. The damp, "sour-smelling" wash rag still exists, however, in many private bathrooms. Imperfectly washed out after use, frequently not wrung out at all, it is often hung over a rack or a radiator near an open window, there to collect dust and dirt. Frequently the same wash rag is used by the entire family, thus affording an easy means of transference of mouth secretions from person to person. In many households each individual has his own wash cloth and his individual towel, but these hang so close to one another that there is ready interchange of bacteria. Each individual should have his own wash cloth. It should be thoroughly washed out with clean hot water after use. It should then be wrung as nearly dry as possible and, if possible, hung in the sun to dry. It should not come in contact with other wash cloths. In the investigations the United States Public Health Service is conducting in regard to the prevalence of trachoma it has been found that common towels probably acted as a medium of distribution of the germ of disease.

### THE CHEMISTRY OF STAINS.

There are five general methods of removing stains: by the use of boiling water, an acid, an alkali, a bleaching agent, or a volatile liquid.

Boiling water will usually remove such stains as fruit, tea, coffee and cocoa. The usual method of procedure is to stretch the stained part tightly over a bowl and pour boiling water through from a height until the stain disappears. Such stains are more readily removed if first washed in cold water or alcohol and rinsed before using the boiling water. Alcohol dissolves the coloring matter in fruit stains.

The more resistant stains such as

## SOLID COMFORT

A PIPE, a book and a handy little Perfection to keep the cold from creeping under the window and up through the floor—there's comfort for you.

The Perfection is so inexpensive, too—with a gallon of kerosene oil it will give you ten hours of warmth. Why be chilly when comfort is so cheap?

### THE CONTINENTAL OIL CO.

(A Colorado Corporation)  
Denver Cheyenne Pueblo Salt Lake City Butte  
Boise Albuquerque

The Perfection is sold at hardware, furniture and general stores. Look for the Triangle Trademark

Kerosene oil is the handiest, most inexpensive of fuels.

Highest Award at  
Panama Pacific  
Exposition



## PERFECTION SMOKELESS OIL HEATERS

ink and iron rust require different treatment according to the character of the stain. Of the acids, muriatic and oxalic (1 per cent) solutions are the most efficient. Stretch the stained part over a bowl of boiling water and apply the dilute acid to the stain. Occasionally dip the stain into the water and use acid again. When the stain has disappeared rinse well in water containing just enough ammonia to give it a slight odor. This will neutralize any bad effects the acid may have on the fabric. Soaking the stained part in the more dilute acids, such as lactic (in milk), vinegar, lemon or tomato juice is sometimes very satisfactory.

If an alkali is required, dilute ammonia is preferred. Use this according to instructions given above for using an acid.

If a bleach is desired one of several methods may be used. Sunshine, peroxide, dilute ammonia and chloride of lime all bleach by oxidation. A very desirable form of the last named bleach is Javelle water. It is prepared as follows:

- 1 pound sal soda,
- 1 quart hot water,
- $\frac{1}{2}$  pound chloride of lime,
- 2 quarts cold water.

Place the sal soda in a granite pan and dissolve it in the boiling water. Put the cold water on the lime and allow to stand until clear. Pour off the clear liquid. Mix this well with the soda solution. Bottle for use and

keep in a cool dark place. To use Javelle water stretch the stained article and rub the liquid into it; rinse quickly in clear water, and when the stain has been removed rinse in ammonia water. When peroxide of hydrogen and ammonia water are used dilute the ammonia in the proportions of one teaspoonful to one pint of water. Use equal parts of the dilute ammonia and fresh peroxide of hydrogen.

In using any of the volatile liquids such as gasoline benzine, alcohol chloroform or ether, place blotting paper or some absorbing material underneath the spot and rub always toward the center of the stain. These liquids are used for removing grease or oil from fabrics that cannot be washed.—Dora Edna Ross, State College, N. M.

### A FEW GENERAL RULES

#### FOR FEEDING CHILDREN.

Avoid highly spiced and seasoned foods, meat and sugar in large quantities, rich puddings, pies and "made" dishes. Children's foods should be simple.

Plenty of milk, hot cream soups, good bread and butter, vegetables and fruits can always be eaten.

Try to give children enough variety so that they will develop a liking for all kinds of foods.

Candy is best when one or two pieces only are eaten after meals.



# SPONGING AND WASHING SILKS.

Lucy T. Boyd.

When sponging any material use a downward stroke and try to get a piece of the same material to use as a wad.

When washing goods in soap and water, do not rub the soap all over the material, but make a lather. It is better not to use the washboard except for very heavy goods.

When ironing black, or in fact any silk, I have found that tissue paper placed over the silk gives the best results. If white China or Japanese silk is ironed when damp, with white tissue paper over it, there will be no change in the color.

These silks turn out beautiful if washed in a lather of good soap. There are various fluids for sponging black silks, such as equal parts of warm water and alcohol, also cold strong coffee, well strained.

Black silk may be cleaned by being

dipped in naphtha or gasoline. Do not wring silk out like other material, but hang out to drip.

Black satin, worn until the surface is shiny, may be renovated by dipping the entire piece or garment into naphtha and hanging out in the air to dry. Satin should not be sponged, as it destroys the surface of the material.

For removing grease spots from silk, rub the spots with a lump of magnesia; or French chalk is good. Rub well and let stand for twenty-four hours, then brush off; if not removed, repeat the process.

Silk scarfs, ties, colored ribbons, chiffon veils, etc., may be cleaned by dipping them into a bowl of naphtha. They must be soured up and down, then rinsed in another bowl of clean naphtha and hung in the open air to dry.

It is wise to keep white silk crepes, chiffon and like materials wrapped in blue paper. This keeps them white. If exposed to the light they are likely to become yellow.

and not a physical condition, and the proper remedy for it is exercise in the open air and not rest.

## THE CARE OF RUGS.

For daily care it is usually sufficient to go over the rugs with the carpet sweeper, followed by a cloth wrung very dry from clear water.

Small rugs should be cleaned out-of-doors each week. Place the rugs right side down, and beat lightly with a rattan or wire beater. Sweep, turn, and sweep the right side.

Do not shake rugs if they can be cleaned in any other way. If it is necessary to shake a rug, hold the ends together, folding first wrong side out and then right side out.

If a rug must be swept on the floor, damp bran, damp torn newspapers, or coarse salt may be used to collect the dust.

Sweeping compounds should not be used on carpets or rugs, as they contain oil which will eventually stain the fabric.

## A BOY'S TRIBUTE TO

### HIS FATHER.

"Because my mother knew that from the day he first met her until he died, or for all the days in fifty years, she was the woman he loved. I should like the woman I marry to know the same thing of me, all our lives long.

"Because he was gentle. Because he loved all flowers, in cool woods and in sunny fields and by dusty roadsides, and brought them home, gathered into clumsy bouquets 'for Mother,' if she could not go herself to see them in the places where they held up their shy faces. Because he loved all children and let them climb over his shoulders and pull his hair.

"Because his eyes twinkled and his face was jolly. Because he smiled at us children even in days when he was hiding black despair in his heart.

"Because, although his work kept him away from home for so many weeks at a time, he wrote jolly letters every day to Mother and us, making jokes out of icy winds and beds covered with snow that had drifted in through farmhouse windows, and of all hardships.

"Because he was deep-chested and strong and because his strength came from work in the fields in such days as he could find no work in his own profession. Because he thought no work of his hands beneath him if it brought us food and a shelter.

"Because he talked to farmers and carpenters and to learned men and to diggers of ditches and to little girls and boys and to Presidents alike, and all loved him.

"Because he wore his overcoats for ten years and his shoes for two years and called his coat 'as good as new, with a little fixing of the lining.'

"Because he thought no sacrifice of any importance if by it we were made to love more truly whatever is good and beautiful and true in life.

"Because he used to put his arm around Mother and tease her until her eyes twinkled and she said, 'Go away, Boy!'

"Because everybody missed him when he went away Somewhere Else—and will always remember him.

"That is why I should like to be such a man as he was."—American Magazine.

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## ORCHARD AND GARDEN

### DRIED FRUITS ECONOMICAL.

Fresh fruits are divided into two classes, "flavor fruits" and "food fruits," according as they are valued for their flavor or as a food, according to the office of nutrition investigations for the United States department of agriculture. Those that are 80 per cent or more water fall under the first classification (apples, pears, peaches, and most of our common fruits), while those containing less fall under the latter (bananas, grapes, and figs). The food value of a pound of dried fruit is, of course, much greater than that of a pound of fresh fruit. A pound of the latter will yield an average of about 6 ounces dried, but the amount of water in the original fruit is no guide to the food value of the dried product.

The main change which takes place during the drying is the loss of water, but other changes also occur. Very often the right degree of heat produces changes not unlike those which occur during natural ripening on the plant.

In some cases the crude fiber which forms the basis of the plant structure is reduced in amount or softened. Much of the starch is changed to some form of sugar. The change in flavor is due partly to the proportionate increase of sugar from loss of water and to absolute increase from chemical changes.

To determine which of two fruits is more economical, not only must the cost of a pound be known, but the amount of bodily fuel that makes for energy and protein (muscle-building material) a pound of each would supply. One must also consider what expense is required to prepare each for the table. Grapes commonly cost less a pound than raisins, but a given sum spent for grapes will buy a smaller amount of nutritive material, since the proportion of water is much higher than in the raisins.

On the other hand, low-priced fresh fruit is sometimes as economical as a somewhat cheaper dried fruit, since the latter would require sugar and fuel to make it ready for the table. Attention should also be directed to the extent of inedible material.

Numerous studies made of nutritive values by the office of experiment stations have shown that dried fruits may be termed an economical article of diet. Fruit products in general contain little protein, but as sources of energy, derived almost entirely from their sugar, dried fruits are decidedly cheaper than meats and compare favorably with dairy products. They are, however, more expensive than cereals and starchy vegetables, such as dried beans and potatoes.

Under no circumstances should fresh and dried fruits be thought a luxury, since they supply the needed nutritive material as an integral part of the diet, besides adding to the attractiveness of the daily fare. If they are to be eaten raw, brands made and marketed in a cleanly way should be obtained.

The amount of dried fruit produced in the United States increased 575 per cent between 1809 and 1909. California produces more than four-fifths of the pearly output. According to a

very rough estimate, each person in this country consumes on an average five or six pounds of dried fruit a year.

The value of the product rose from between four and five millions to over twenty-one millions in ten years. The average wholesale price, however, has not advanced with the increased demand; on the contrary, it has dropped from about five and one-half cents to about four and one-half cents per pound.

Dried fruits are especially useful when the supply of fresh fruits is limited or where storage space for fresh fruits is lacking. Besides being used alone, they may be mixed into cakes, puddings, confectionery, and other dishes. They afford a nutritious and economical way of securing a variety of diet, which is often overlooked by the housewife.

### CARE OF PLANTS IN THE CELLAR.

The great secret of keeping a miscellaneous collection of plants in a cellar is in trying to promote rest rather than retard it. In the case of most bulbous plants, water should be withheld entirely; hydrangeas, aspidistras, large crotus, callas, all aloes, and nearly all large tub plants, rubber trees, lemon and orange trees, palms, azaleas, and the like, may be watered once or twice, as the soil gets very dry; geraniums and begonias and fuchsias need very little water except when they are in small pots, and the soil should not be allowed to get quite dust dry. It is always better to err on the side of dryness than of too much moisture. Large geraniums may have the dust shaken from their roots and hung in bunches to rafters or put in barrels. So long as roots are kept dry and away from currents of air, they are all right.

Late in the winter most of the plants will awake and begin to send out tiny green shoots; if they have been stimulated this will occur too early and the shoots will be frail and finally die, but if a judicious course of retarding has been practiced, they can generally be put outside in time to save this new growth.

### MEND THAT MACHINERY.

So long as good weather continues in the fall most farmers are so busy with thrashing, corn and potato harvest, fall seeding, hauling, etc., that less important work is usually postponed until winter. However, the exercise of a little thought and the expenditure of a very few minutes at this season will often save not only hours but days later on when the weather and roads get bad and outdoor work is impossible.

Then the odd jobs of overhauling the farm equipment, repairing, painting, etc., which have been put off until a slack season will require attention; but all too often the necessary materials will not be on hand, and the work will be delayed until it is possible to make a trip to town, and not infrequently it remains undone until the busy season the following year, when necessity demands it.

A list should be made of the things that will be wanted for this work. It will take only a few minutes to jot them down as they are brought to mind, and then on the next trip to

town they may be bought and set aside so they will be ready when wanted. The condition of the different machines which will or should be overhauled should be noted and the parts which will need to be replaced purchased. Then there are the odd jobs of repairing buildings, fences, gates, etc., which will require lumber and nails. There is no need to make an extra trip for them when wanted; they may be brought home the next time a load is taken to town. Likewise the lumber and hardware for the small jobs of construction which should be done before spring. Also the paints, oils, putty, and brushes which will be required in painting the various farm wagons, implements, inside woodwork, furniture, etc., and above all, the necessary materials for the improvements planned for the house should be obtained, so that they can be completed this winter and not have to wait another year.

Everyone knows how much more satisfactory it is to have the necessary equipment ready to perform a piece of work when an opportunity presents than to get started on it and then find that it will have to be postponed until a trip can be made to town, which, even if the roads are good and the trip can be made at once, means a loss of time and added expense.

It is astonishing how much can be accomplished on rainy days or during slack times, when the tools and materials are at hand, and there should be no difficulty in overhauling practically every implement on the farm during the winter season and having them ready for next season's work. The value of these "stitches in time" is frequently out of all proportion to the small amount of time they require. Aside from the satisfaction of having each implement in first-class shape when it is needed, there is the actual saving accomplished by avoiding having horses and hired help standing idle while repairs are being made, which, in turn, frequently means a loss of part of a crop.

It is useless to go into detail concerning the many jobs which can be accomplished with profit during the winter months; there are plenty of them which will occur to the farmer who will spend a few minutes in considering the matter.

### FALL CLEANING OF THE TRUCK GARDEN

In the control and prevention of plant diseases sanitation of the garden is important. There are a number of our fungus diseases which rest over the winter on or in decayed stalks, leaves, or fruit. The resting stage of the fungus is resistance to winter conditions.

If a disease is not destructive one season, it is no sign it will not be another season. Rake up and burn the old stalks, leaves, and fruit left in the garden patch.

### HOW TO MAKE AN ICE PIT.

A very common type of ice house and one that seems to give good satisfaction is a pit dug in the ground and covered with a board roof to keep out rain and snow and to serve as a shade. Straw is used between the walls of this pit and the ice. The straw should be packed very tight in this space in order that the ice may

keep from melting as much as possible. One instance has been observed where baled straw was used with good results. The bales were placed around at the walls before the ice was packed.

When an ice pit is not feasible some type of above-ground house must be used. The thing to bear in mind is to have the walls properly insulated, so that they will not admit heat from the outside. Ventilation should be provided for the space above the ice. This is most easily accomplished by an opening at each end near the peak of the roof.

## The Grand Theatre

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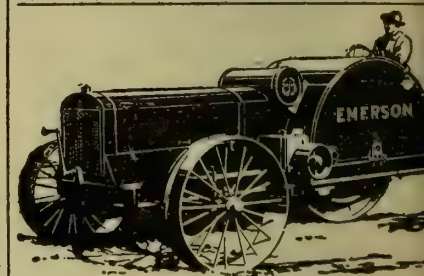
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# Price of Sugar Beets for 1916

The Utah-Idaho Sugar Company announces new basis of making payments for sugar beets for 1916.

A flat rate of \$5 a ton for sugar beets, wherever they may be delivered with an advance of 10 cents for each half-unit sugar content over 15½ per cent, will be paid.

The only provision attached to the new plan is that the existing tariff on sugar of 1 cent a pound is continued. The sugar manufacturers everywhere in the United States believe that Secretary McAdoo's recommendation that the tariff be retained will be acted upon favorably by President Wilson and are outlining plans for next year.

In addition to the straight price of \$5 per ton delivered at any plant they will pay on the following basis:

	Per ton.
On 15½ per cent beets.....	\$5.10
On 16 per cent beets.....	5.20
On 16½ per cent beets.....	5.30
On 17 per cent beets.....	5.40
On 17½ per cent beets.....	5.50

Also 10 cents for each additional half unit above 17½ per cent, the basis to be fixed on beets entering the factories as follows:

The three factories in Idaho—Blackfoot, Idaho Falls and Sugar City

—will be grouped together and the beets entering any of these factories as a whole and aggregating the above sugar content will be paid for on the basis named. The reason for this is that the sugar content in the entire state of Idaho, as a rule, is about uniform and there is little difference between the beets of individual growers at any of the factories.

In Utah conditions are a little different and there are many changes in the different localities. Therefore, it has been decided to take the beets entering the Garland factory as a whole as one unit, the new factory at West Jordan in Salt Lake county, as another unit, Lehi and the cutting stations as one unit, Payson and the new factory at Spanish Fork as one unit and Sanpete and Sevier counties will be grouped together.

The sugar company is now paying a flat rate of \$5 a ton for beets, but in some instances a slight deduction is made to assist in paying freight charges. At no time, it is said, has the deduction been more than 25 cents a ton. Estimating that the beets in 1916 will be as rich in sugar content as they have been during the past two years it is estimated that

the farmers will receive about \$5.30 a ton next year.

## "LOOK FOR YOUR MONEY WHERE YOU LOST IT"

Such was the counsel of a wise father to his son. The boy had failed in some project he had undertaken. Just what it was, we do not know. He might have lost a crop of wheat because of a hail-storm and was afraid to try wheat again. It may be that he lost a drove of hogs with cholera and declared that he would never again raise hogs. Possibly it was new to him and he was not onto the "how" of doing it. Sometimes a person learns more when he fails than when he succeeds. It is the schooling of experience that counts.

A man may fail to make money on a farm. He may find it harder work than he had thought for. That is no indication that he should quit. He is only preparing to begin. Of all lines of business, farming is certainly the most flexible in this respect. Every man has within his own power the possibility of increasing or decreasing the profits, of making his work heavy or light according to his managing ability.

The use of proper farm records will show up the why and the wherefor of a lot of the leaks. Plugging up the leaks is one good way of increasing profits. Put down what you do

and where you did it, what you spent and where you spent it, what you received and from whence it came. Then at the end of the year look over your record and see how much you did and what you got for doing it. Quit guessing. A guess is dangerous if you rely upon it for dollars and cents.

Some methods of keeping records are easier than others. Get a simple and complete method and you will enjoy keeping a good record.—O. S. Rayner, Colorado A. C.

The latest automobile is equipped as follows:

Speed of 10 miles per hour shows white bulb;

Speed of 20 miles per hour shows green bulb;

Speed of 30 miles per hour shows red bulb.

Speed of 40 miles per hour shows a music box under seat which plays "Nearer, My God to Thee." Imp. and Vehicle Record.

A successful man is one who has tried not cried; who has worked, not dodged; who has shouldered responsibility, not evaded it; who has gotten under the burden, not merely stood off, looking on, giving advice and philosophizing on the situation.—Exchange.

## Seven and Three-Tenths Percent

a year will pay a loan from us, both interest and principal in 35 years, without commissions, renewal charges, or other expense, and you may pay off your entire loan any time after five years.

On a loan of \$1000, \$73 a year pays both interest and principal. At 8 percent you are paying \$80 a year for interest alone and at the end of the time you owe the principal of \$1000. Can we not explain our plan to you?

This is a Co-operative Association, therefore, you must necessarily become a shareholder in order to enjoy the advantages it has to offer.

Each share of stock will entitle you to a loan of \$1500.00. Your share of stock will net you annual dividends. The stock will cost you \$100 per share, \$50 down, \$25 in 5 months and \$25 in 8 months without interest.

The sooner you join the association the sooner you will get your loan.

Call or mail a postal card today to the

**The Inter-Mountain Rural Credit Association**  
McINTYRE BUILDING. SALT LAKE CITY, UTAH.

### THE INTER-MOUNTAIN RURAL CREDIT ASSOCIATION

## 6% MONEY TO BE LOANED ON UTAH & IDAHO FARMS

This company will be MANAGED BY THE FARMERS THEMSELVES

NO FEAR OF FORECLOSURE

JOIN THE ASSOCIATION now and reap its BENEFITS

A Co-operative Organization

THE INTER-MOUNTAIN RURAL CREDIT ASSOCIATION INCORPORATED

Money loaned 5 to 35 years

The Inter-mountain Rural Credits association booth and representatives at the Utah State Fair. Right to left—Louis L. Allen, P. T. Moyes, James T. Hammond president of the association; R. Albert Moyes and V. H. Gregg.

This association has been organized for the purpose of furnishing money to Utah and Idaho farmers at 6 per cent for periods of from five to thirty-five years. Although the association has been organized less than a month, the farmers are receiving it with enthusiasm. The importance of rural credits organizations is becoming recognized throughout the country, as was evidenced in the resolution indorsing the organization of

associations, passed about two weeks ago by the International Irrigation congress, while in session at Los Angeles. In connection with the popularity of the movement it is noteworthy that "Rural Credits" day was celebrated at the Panama-Pacific exposition September 22 and Myron T. Herrick, formerly ambassador to France, delivered an address on the subject. The Inter-mountain Rural Credits association has its head offices in the McIntyre building, Salt Lake.



## POULTRY

### GETTING READY FOR WINTER.

During the fall season all nature prepares for winter, the plants ripen their buds and fruit shed their leaves and prepare to pass through the winter in a dormant condition.

Fowls respond readily to the influence of the season by laying on their old coat which has been worn for a year and making a new coat to protect against the storms of winter. Therefore, the fall season is the natural moulting season.

The hen's success as an egg producer during the winter greatly depends upon how she goes through the moult.

The habit or manner of a hen's moulting depends principally upon three things, the same as egg production, namely breeding, feeding and the season of the year.

The difference in breeding is observed where hens are kept under exactly the same conditions, the only difference being the breeding, while the difference in feeding is observed where hens of the same breeding are fed differently. A hen which has a good digestive system and a good circulation of blood has the ability to take the nourishment of the food and to distribute the same to the different parts of the body. She can manufacture a great many eggs or manufacture a coat of feathers in a short time.

The high producing hens in contest proved to be quick moulters, moulting practically all feathers at one time and usually late in the season. The hen which begins early and moults only a few feathers at a time is seldom a high producer.

The influence feed has upon moult depends as much upon how it is fed as upon what is fed. The principle involved is building the system up rapidly after it has been reduced. If the system has been reduced to a low stage by lack of feed, broodiness, etc., the muscles holding the feathers relax, causing the feather to be loose, then when the new feathers start to grow, as the system is built up the old feathers are pushed out of the way.

Hens which go broody in the latter part of the summer and get poor usually moult when their systems are built up again.

One method of producing moult is to confine the birds for ten days in close quarters with about half ration, give a tablespoonful of Epsom Salts at the end of five and ten days, then feed the following ration till new feathers are mature:

Grain, equal parts, corn, wheat and oats.

Mash, equal parts each by weight, corn meal, wheat bran, shorts, ground oats, beef scraps, and one half part each of oil meal and sunflower seed.

### WHITEWASH BANISHES

#### THE MITES.

If you are going to be a successful poultryman, young man, you must get after those mites. They sap all the life out of the hens and cut down the egg supply enormously. They kill off large numbers of the most promising chicks. They are the worst enemies with which your flock has to contend.

But you can get rid of them if you will. Have a thorough housecleaning

some fine day this coming spring. Clean up the dirty floor. Take out the roosts and scrape them, and clean out the dirty nests. If they are too badly infested, burn them up and make some new ones. Brush down the cobwebs from the corners.

Then take a spray pump and spray the whole inside of the poultry house, getting into all the cracks and corners with a mixture of one part crude carbolic acid to ten of kerosene. This kills any of the mites which may have fled to the cracks and crevices for safety. After this is dry, put on the whitewash. It may be put on with the same spray pump, but it sticks better and lasts longer if it is put on with a brush. Lice and mites can't stand whitewash.

After the whitewash has thoroughly dried, refit the house with clean roosts and nests and put some clean straw on the floor. If you wish, you can dust the hens off with lice powder before admitting them to the house. Repeat dusting again in about a week, or better, apply the blue ointment. It is a very good time to do the job. If you will do this, you will find that the lice have departed for some other henhouse whose owner is not so good a poultryman as you.

#### To Improve Farm Flock Cull Out

The slow growing chickens.  
The old hens with long toe nails.  
The long or "crow-headed" hens.  
The poor winter layers.  
The hens that stay on the roosts.

#### DON'TS FOR DUCK RAISERS.

There is money in raising ducks on Utah farms, but the beginner should "go easy until he learns the ropes."

These negative suggestions may be of service to boys and girls who are interested in this branch of the poultry industry.

"Don't keep two or three different kinds of ducks. Choose one variety and breed for quality.

"Don't try to raise duckling on whole wheat, cracked corn, or commercial chick feeds. If used at all, these feeds should be well cooked, for, ordinarily, ducks do not consume enough grit to grind dry grain.

"Don't try by mixing it with their food, to force ducks to eat more grit than they want.

"Don't be afraid of overfeeding. Ducks should be fed four or five times daily.

"Don't omit fresh vegetables and green stuff from their diet.

"Don't allow the feed to stand from one meal to the next and expect ducks to be satisfied with it.

"Don't give ducks sour feed, as it is likely to cause convulsions.

"Don't forget plenty of clean, fresh, water, and give them a chance to roost in the shade.

"Don't let their coops get damp and filthy."

Sell old hens or eat them before they eat their heads off. Now that the old hens have ceased to be productive the farmer should begin a systematic culling of his poultry flock. All hens not to be held over for next year should be sold. While the cost of keeping hens is seldom realized, they are eating valuable food. This expense with no production is cutting down the profits.

Following low round trip rates apply from Salt Lake City:

<b>Home Visitors'</b>	Denver .....	\$22.50
<b>Excursions</b>	Colorado Springs.....	\$22.50
	Omaha .....	\$40.00
	Kansas City .....	\$40.00
	St. Louis .....	\$51.20
	Memphis .....	\$59.85
	Chicago .....	\$59.75
	Minneapolis or St. Paul.....	\$53.85

### EAST

Via



October 23.

November  
20 and 23.

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# THE FARMERS' MARKET PLACE

**For the Buyer**

This market place offers our subscribers and readers a very good place to advertise. If you have something to sell or want to buy here is the place to tell it. These advertisements are read because they offer bargains, your bargain should be here. Take advantage of this opportunity today.

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### Improved Chester White Swine

The Home of the Western Prize Herd. My winnings at Idaho State Fair 1913, were 13 first, 3 seconds, champion boar and sow, and champion fat barrow. At a Tri-County fair held at Jerome, Ida., I took all but one second. I have anything wanted in Chesters from a weanling pig to a champion boar or sow at prices all can afford. High class stock. Write me.  
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100 acres Sevier Valley house, stable, sheds, first-class water right, part in alfalfa, fine for beets, grain and hay; big snap at \$4500.00—\$1500 cash, balance easy.

290-acre improved ranch, 4 miles from Richfield, independent water right, good for beets, hay, grain and stock. Horses, cattle, hogs, all machinery and most of crop go with place. Cheap at \$75.00 per acre; terms.

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WON AT UTAH STATE FAIR, 1915—Grand Champion Boar, Grand Champion Sow, Senior Champion Boar, Senior Champion Sow Eight First Prizes, Five Second Prizes, and Five Third Prizes.

**RICHARDS DEFENDER**, Grand Champion Boar was pronounced by many cavable judges to be the best Duroc Boar ever brought west. He is 17 months old weighs over 500 pounds. The big type with quality. That's why he has so many admirers.

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We can make immediate deliveries of young stock, either sex, from this champion herd at reasonable prices.

Express rates on stock purchased from us is a small item as our ranch is only 135 miles north of Salt Lake City.

## RICHARDS' LIVE STOCK COMPANY

VIRGINIA

JESSE S. RICHARDS, Manager:

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One 20-Horse Gasoline Tractor.

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MANY PEOPLE READ THIS PAGE  
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## Stockmen Farmers Buyer or Seller

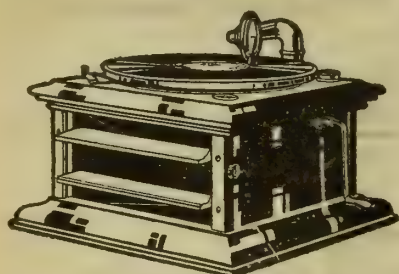
Has it occurred to the number of people that can be reached thru these columns?

The field we cover. Utah and Southern Idaho, all of the territory within 300 miles of Salt Lake City. Has there ever been a better time than the present to secure business in this rich territory served by the Utah Farmer. If you have stock to sell we can help you. If you want to exchange or sell a farm here on this page is the place to tell about it. The Utah Farmer goes into more homes outside of Salt Lake City and Ogden than any other paper.



# Invest part of your BEET MONEY in a COLUMBIA GRAFONOLA

It will bring you "all the music of all the world"--any music at any time, and it is the best you can buy for the money



**METEOR**  
**\$15**

The best low-priced instrument that can be produced. Built of quartered golden oak. Size, 13 inches wide by 14 inches deep.



**JEWEL**  
**\$35**

The "Jewel" has the real Columbia tone—the tone that has made Columbia famous—full, resonant and natural. Quartered golden oak. Size 16½ inches square.

or you may purchase the JEWEL or LEADER Grafonolas on terms of \$10 Cash and \$7 a month. NO INTEREST.

With a Columbia Grafonola in your home. You would never lack entertainment and amusement of the RIGHT KIND. The world's greatest singers, dramatists, operatic stars, comedians—all provide for you, unceasingly, untiringly and at an instant's notice, the best that's in them.

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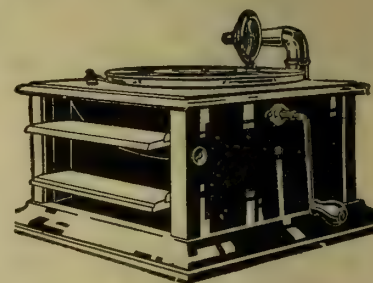
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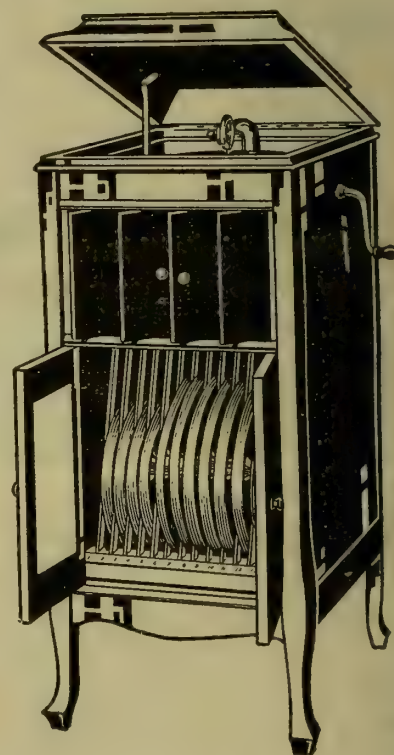
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If you do not wish to pay all cash you may purchase either the METEOR or ECLIPSE Grafonolas on terms of \$10 Cash and \$5 a month;



**ECLIPSE**  
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In all its construction and in its tone quality the "Eclipse" is a Columbia of which we are justly proud. Mahogany or quartered golden oak. Size, 15½ inches square.



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An upright and fully cabined instrument of strikingly handsome appearance. Mahogany or quartered oak in golden, fumed or Early English finishes, or satin walnut. Size, 42 inches high, 19 inches wide and 21 inches deep.

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I enclose \$..... for which send me the.....Grafonola  
and 12 records. I will pay the balance in cash on.....  
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My name..... My occupation.....

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45 MAIN ST. SALT LAKE CITY, UTAH.  
"OLDER THAN THE STATE OF UTAH"  
"OLDER THAN THE STATE OF UTAH"





THE **UTAH FARMER**

Devoted to Agriculture in the Rocky Mountain Region.





# Thanksgiving 1915

With half of the world in bloody strife and the other half in peace, we greet Thanksgiving Day.

As we contemplate the awful havoc wrought among our brothers, we shudder. As we view the bounteousness of our fair West, our hearts go out in gratitude. But ours is not a self-righteous, self-congratulating Thanksgiving—it is but the expression of a grateful heart.

Our fields have teemed with mellow grain and sugar beets. Old mother Nature, herself, has given us propitious weather for the harvest, and the market has been liberal with its price.

Our children are well clothed and shod and fed. The power of health is theirs. Their schools are the nation's best. One room buildings are almost now a memory.

Our standard of living has been raised—both urban and rural. Men and women have come to participate actively in community affairs and to appreciate their franchise.

We're thankful for our public press. NO MEDIUM OF EXPRESSION HAS BEEN SO POTENT IN THIS UPWARD MARCH OF MEN AND WOMEN. Without its daily or weekly message, we should be lost in the wilderness, and ours would be a hermit's life.

We're thankful that within the last decade READING HAS BECOME POPULAR. No farmer who pretends to be anything lets an evening slip by without putting on his "specs." HIS MIND NEEDS THE NEWS AS HIS BODY NEEDS THE DAILY BREAK.

We're thankful that here in this rock-ribbed state of Utah we have problems and that we have horse-sense enough to try to solve them. THE SOIL, THE STOCK, THE DAIRY, AND THE ORCHARD ARE HURLING QUESTIONS AT US ALL THE TIME. Some fellows are pretty good dodgers and manage to get along; others aren't and are up against it—you bet they are!

We're thankful that the farmers of the State have an organ known as the Utah Farmer, which is smashing left and right at these problems of the soil. And this magazine in return is grateful to its numerous friends.

BY NEXT THANKSGIVING DAY BIG THINGS WILL HAVE BRIGHTENED THE UTAH FARMER, IF—YOU HELP—REALLY, A PAID-UP SUBSCRIPTION MAKES AS GOOD AN IMPRESSION ON US AS A THANKSGIVING DINNER. If you are in arrear, we'll appreciate a word from you with a little blue check pinned to it.



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1864.

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Devoted to Agriculture in

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ONE DOLLAR

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VOLUME XII.

LEHI, UTAH, SATURDAY, NOVEMBER 20, 1915

No. 16

# Why You Should Celebrate Thanksgiving Day

Alexander Lofgren

THESE are many reasons why the people of Utah should celebrate next Thursday November 25 as Thanksgiving Day. We have this year great grounds for thankfulness by reason of our material prosperity. The fields have yielded their increase. Nowhere in all our land has there been an absolute failure of crops. True, there has been a shortage here and there, but generally the returns to the farmer have been exceptionally good. So far as material things are concerned, we have greater reasons for thanksgiving than in any recent years.

We will make a mistake if we assume that all of this comes to us from any particular merit or excellence in ourselves. It is true that the better the farmer the more abundant his crops are as a rule for this much we may humbly take credit; but taking us as a whole, it is but a blessing of a Divine Providence—who has seen fit to bless us with a great harvest, for which we should be very thankful.

Where would you and I be today, with all our proud and boasted happiness and prosperity, were it not that Providence has blessed us as no people on earth were ever blessed before? It is good that Thanksgiving Day comes once a year to make us reflect upon the fact that we would be creeping along at a snail's pace down the road of progress were we dependent upon ourselves alone. We did indeed sow the seed in the springtime, but a Higher Power sent the rain and the sunlight and brought our crops through to bounteous, prosperous harvest.

Yes! we have had our troubles, trials and disappointments and are still bearing our burdens. I am sure that the good things have far more than balanced the bad things this year. I am sure we should approach Thanksgiving Day with a truly thankful heart. The farmers of Europe have been scattered like chaff before the wind; we are still with our loved ones. Farm homes in Europe have been shot down and torn down, like houses built of cards; the wintry winds are still shut out by our good walls, our farm homes are intact. The crops of European farmers have been trampled under foot, never brought to the harvest; we have brought ours

through to such a harvest as the world never saw before. Dare we adulterate our thanks this year with any repining over minor losses? Should we not be ashamed to let the thought enter our minds?

As a nation we should be more than thankful that our country is at peace with the world. This is realized more fully this year than usual when over two-thirds of the world's people are at war. The European nations engaged in the most terrible war that has ever been waged are not

that out here by ourselves in this mighty Western Hemisphere God Almighty is permitting us to work out our own destiny in our own way—for removed from the World's black hatreds and quarrels. Is not this a blessed privilege for you and me today? Does it not mean much to our children in the tomorrows of the future?

Perhaps the present war could not, under existing conditions, have been avoided, but let us pray that the final outcome of this terrible scatastrophy

knowledge of how to avoid it. Some day nations will learn to settle their misunderstandings between themselves just as individuals of these same nations now are compelled to adjust their difficulties without recourse to fighting.

## THANKSGIVING A TIME FOR FAMILY REUNIONS AND GREETINGS.

Matilda Johnson.

The old family Thanksgiving did much to keep families together, to develop family pride and self-respect, to mold it into a clan without developing a clannish spirit, to make the young folks feel that there were really family ideals below which they dare not fall, and family ethical codes which they dare not violate, to cement a blood tie which gave inward strength to every individual in the trials and conflicts of the coming year.

Thanksgiving is a most fitting time for family reunions, the gathering under the parental roof of the children and their families in order that there may be a renewal of filial love and a rebinding of family ties. The young man who has wandered away will have a yearning for home again as the thanksgiving season approaches and daughter who has been pursuing her studies or teaching or who may be engaged in a busi-

ness or professional way as a breadwinner will think of the old home back yonder as the time comes for the thanksgiving feast.

Family reunion, the mingling of loved ones again around the old fireside, the happy greetings and the shouts and laughter of grand-children loosen up the wellsprings of the human heart and exalt the nobler hopes and desires of our natures. And so let the people unite as families and as communities on this annual thanksgiving and render unto the Heavenly Father a just tribute of praise for his wonderful, watchful care over the children of men.

The wide spaces over which families are often scattered in these modern days often makes it impossible to bring all the members of the family together; and more's the pity. The fierce strife of modern competition tends to separate families and make

(Continued on page 11)



## THANKFUL FOR BOUNTEOUS HARVEST.

only spending millions of dollars a day, thus piling up debts so enormous that it will take them a century or more to get out from under their crushing weight, but they are also killing hundreds of thousands of their best men, creating widows and orphans by the millions that are destined to suffer from the effects of the conflict as long as they live. Nor is this all. A generation of children yet unborn will suffer throughout their entire lives from the same cause.

Let us be thankful that we live in a land which is splendidly isolated from the World's greed and jealousies—a land lashed by the waves of two mighty oceans, rather than confronted day and night by the bristling frontier fortifications of envious enemies—that the whirl of wholesome industry and the daily song of the thrifty husbandman are not intermingled with the sound of the clanking sword—

will open the eyes of all the peoples on earth to a full realization of the fact that war is wrong, and that a means be found by which disarmament will become world-wide and war between nations be forever stopped.

Let us be generous in lending a helping hand to the millions of our brothers and sisters across the Atlantic, who, through no fault of their own, are suffering for want of the bare necessities of life. There is perhaps no better and truer way of showing a thankful spirit than to aid those in need of help.

As we view this dreadful war from this distance, we are apt to conclude that the world's veneer of civilization is very thin indeed and that we are still but a step removed from barbarism. In reality, however, the situation is not so bad as that. None of the nations at war are today fighting because they love to kill and destroy, but rather because of lack of



## DAIRYING

### IN OUT OF THE STORM.

Edgar L. Vincent.

When the young man who draws our milk to the creamery came home this morning, he reported that the amount credited to us for the twenty-four hours just past was about twenty pounds less than it had been for the day previous.

At first I could not think what should be the cause of this falling off. It had not appeared that any of the cows was sick or that any unusual quantity had been taken out for use in the house. And then I remembered that for some time the night before it had stormed heavily. The cows had been out in the rain and came into the stable thoroughly soaked.

There was the cause of the dropping off in milk yield. The cold storm had done it. Is not this the experience of every farmer in the fall and spring each year? We find the milk supply shortened after every storm to which the cattle are exposed.

We are milking seventeen cows just now and the falling off must have been not far from a pound to a cow. That was for one day, only. If we were to follow the scales up, we would no doubt have found that it took several days for the cows to get righted up from their exposure. The cost of the storm would have been spread over those days, naturally, and by figuring up the cost of the milk per hundred pounds, we could tell pretty accurately what the storm and its after effects took right out of our pockets.

Now, storms sometimes come up unexpectedly, so that we are not able to get the cows in out of them; but at this time of the year there is little excuse for us if we do not do our level best to shelter our stock from the raw weather. No dairy herd ought to be permitted to lie out on the cold ground a single night after the weather gets chilly, as it is in most sections after this time. We cannot afford it, anyhow.

Even in warm weather I have before now been out into the pasture and brought the cows down myself, to protect them from bad storms. It pays, at such times, to have a little something for them to eat, a bit of hay or corn or perhaps some grain of some sort, to make up for the pas-

ture grass they are missing.

In another way this pays. The cows will soon come into winter quarters. If they are in good condition and strong and fleshy they will go through the winter better than if they were left to fall off in weight and drop off in milk.

It seems to me the plan of stabling cows a good share of the time summer and winter is not a good one. Cattle need exercise, more than they get by being let out to be watered twice a day; but I do believe it would pay us well to get them in every time a raw storm threatens.

### RAISING HEIFER CALVES.

The records of two herds of dairy cows owned by two neighbors furnish a striking example of the utility of dairy records to the man who really wants to build up a good herd. The first man has been cow testing for four years and has selected his cows carefully, studying their various preferences and capacities, each one as an individual. He raises heifers from his best cows; four two-year-olds gave last year an average of 7,144 pounds of milk, while his herd of ten gave an average of 8,059 pounds of milk and 259 pounds of fat.

The neighbor considers it simpler to buy just what cows he can; he does not raise any calves. Last year his nine cows, all upwards of six years old, except two heifers, gave an average of only 4,240 pounds of milk. This is only about one-half as much milk per cow as in the first herd. The best cow gave only 6,355 pounds, less than the average of the four heifers in the first herd. He has nothing on which to start building up a good dairy herd, unless it be his judgment, in "picking a winner," which judgment, by the way, does not appear to be of Al quality. The owner of the first herd has the advantage of four years of dairy records, practically indispensable to the real dairy farmer. Cow testing pays.—Dept. of Agriculture, Ottawa, Canada.

### ANIMAL DISEASES.

It is estimated that the United States has already expended over \$1,500,000 in fighting foot-and-mouth disease. While this amount seems large and yet when compared with the aggregate losses from other contagious diseases of animals it is not so astonishing.

It is estimated that Texas fever causes a loss of \$40,000,000 a year. The government has been spending large sums of money fighting the fever tick which causes the disease but the greatest loss is to the southern states which because of quarantine are excluded from the markets of the north for several months each year. Tuberculosis of livestock comes next with a loss of \$25,000,000; contagious abortion, \$20,000,000; anthrax, \$1,500,000; scabies of sheep and cattle, \$4,600,000; blackleg, \$6,000,000; glanders, \$5,000,000 parasites, \$7,000,000; poultry disease, \$8,750,000; other disease of livestock, \$22,000,000, making a grand total of over \$200,000,000 lost to breeders and dealers in livestock every year.

Most of these diseases are preventable. These figures which are given

## Nov. 29th to Dec. 4th Electrical Prosperity Week

To celebrate Electrical Prosperity Week we will offer from Nov. 29th to Dec. 4th, any electrical appliance in our stock including G-E Ranges at

# 10 PER CENT OFF

How Much Better the World Has Been Since Electricity Became Your Servant.



What Excellent Xmas Gifts Electrical Appliances Make.—How Useful—and So Acceptable!

### From Darkness Into Light

Electricity, operating in many ways, has created comfort-factors that have carried the world out of the Darkness of Drudgery into the Light of Convenience.

It has, more than any other agency, enhanced the comfort, health and happiness of mankind.

### Consider Its Wonders

The same current, carried by simple little wires, serves us with light, heat or power. It carries our burdens; it transports us from place to place. It lights our homes, stores and streets, and thus protects us against the terrors that thrive in darkness.

Electricity does our sewing, cooking, washing and ironing. It cleans the home, and keeps it free from dirt and germs. It supplies warmth in winter, and cool comfort in summer.

It links together the people of the world by the wireless cable, the telegraph and the

telephone, making one huge family of us all.

Electricity enters into the manufacture of practically all our necessities, making them cheaper and better than would be possible by any other means.

### Just Imagine

If you will, what would happen if electricity were suddenly eliminated.

The wheels of commerce would be halted. We would be in darkness.

Without telegraph, cable or wireless, we would be cut off from the outside world. Without the telephone, we would again be deaf and dumb to all absent ones. Progress and Prosperity would suddenly be checked.

### In Acknowledgement

Of the service electricity is rendering, the electrical industry, and other great industries co-operating with it, decided to dedicate the week of November 29 to December 4 to a national celebration, to be known as Electrical Prosperity Week.

## UTAH POWER & LIGHT CO.

"Efficient Public Service"

### Mail your money

It is easy to do business with this solid old bank no matter where you may be.

Drop a letter in the post-box. Uncle Sam becomes the receiving teller or paying teller.

A postal card inquiry will bring full explanations.



**Walker Brothers  
Bankers**

Salt Lake City.

Founded 1859. "Courtesy Always."

us by competent authority suggests the field of opportunity that invites the veterinary profession. We must in the future raise the livestock to feed the ever increasing population and with the increased livestock production we may expect more diseases. The control of animal diseases constitutes one of the great economic problems of this country and it is up to the veterinary profession to do it.

### SALT REQUIRED FOR

#### DAIRY COWS.

An important item that is often overlooked in the management of the dairy herd is the necessity of providing salt in the ration of the cow. All animals that consume large quantities of vegetable food require salt. Babcock, of the Wisconsin Experiment Station, found in his experimental work that cattle when de-

prived of salt, became emaciated and were of low vitality and finally suffered a complete breakdown. He recommended that they should be fed three-fourths of an ounce per day live weight with an additional 6-10 ounce for each 20 pounds of milk produced.

While salt may be provided in the daily ration by mixing it with the grain, an equally satisfactory method in practice is to keep it in a convenient place where the animals may have ready access to it when they so desire. It may be used in the form of rock salt or placed in boxes in the feed lot. However, it should be borne in mind that salt is very essential to the economical handling and health of dairy cattle.—E. V. Ellington, Idaho Experiment Station.

Right now is the time to prepare for winter. How about your stock, are they ready for a good cold storm.



# Sewing Lesson X

## EMBROIDERY STITCHES.

**Common Supplies** — Thimble; Needles the size and kind will depend on the stitch, material and embroidery cotton, etc.; Emery; Scissors; Embroidery Hoops; Working Cotton, etc.

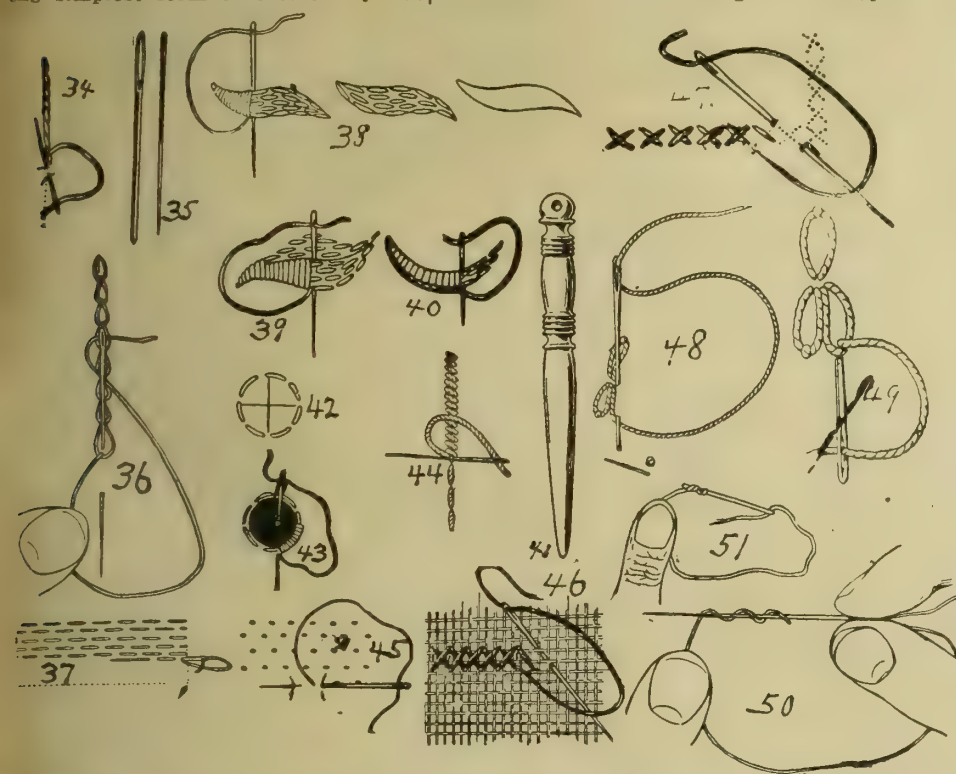
**In Embroidery**, as in sewing, you must keep your stitches even and your work nice and clean. A good plan is to have a sampler of unbleached muslin, seven inches long. Your sampler should have on it all the different embroidery stitches as you learn them.

**The Outlining Stitch**—This stitch is the simplest form of embroidery. It

the needle is in the same position as for outlining. Now turn your work so that the line lies up and down across the forefinger of your left hand. Take a stitch on the line, pointing the needle toward you. Bring the needle through, letting go of the thread under the thumb when it pulls itself away. The needle is then placed in the same hole from which the thread came out, and out on the stamped line the same distance as the first stitch. The thread is again held down with the thumb while the needle is drawn through. Continue in this manner until the line is covered. (No. 36.) Fasten off the thread as described in the outlining. Chain-

petal or leaf to show a vein running up the center. The leaf is padded as if for satin-stitch, but be careful to pad lengthwise and not to cover the vein. The satin-stitch is then worked over the padding. Starting from the point, work across as you would for satin-stitch until the point is reached where the midrib begins. Now work from the lower edge of the leaf to the midrib until the lower half of the leaf is worked. (No. 39.) Then turn the work so that the unfinished part is nearer to you and work from the edge to the midrib until the leaf is completed.

**Buttonhole Embroidery**—This buttonholing is different from the buttonholing used in plain sewing. It is used on the edges of collars, cuffs, box plaits and of aprons. The scallops re



No. 34—The thread above the needle for smooth outlining.  
No. 35—Long eyed embroidery needles.

No. 36—Simple chain-stitching.

No. 37—Embroidery darning.

No. 38—The three little leaves showing how to pad and work in satin-stitch.

No. 39—How the split satin-stitch is worked.

No. 40—The embroidery button-holing or scallop.

No. 41—The stiletto for piercing.

No. 42—The slashed eyelet.

No. 43—The partly worked eyelet.

No. 44—French stemming.

No. 45—Making the seeding stitches.

No. 46—Cross-stitching over canvass.

No. 47—Cross-stitching over the stamped canvass.

No. 48—Making the loop for the lazy-daisy.

No. 49—Catching the loop down.

No. 50—Winding the thread for a French Knot.

No. 51—Catching the knot down.

is used to represent a single line, stems or veins.

Draw a straight line on your sampler. Thread a No. 7 sewing-needle with a short piece of blue or red marking cotton No. 25. No knots should be made.

Hold your sampler so that the line is in the same position as No. 34. Take three running stitches on the line, so that the needle is at the extreme left-hand end of the line. Take a little stitch on the line, pointing the needle to the left. Let the thread lie above the needle. Bring the needle in position for the next stitch and continue working as directed until you reach the end of the line. The thread is ended on the right side of the work by taking two or three little backstitches on the stitches which have been already worked.

**Chain-Stitching**—This stitch is a good one to use when a fancy outline is wanted. It is also used on single lines and is best carried out in heavy cotton such as No. 16 marking cotton or medium weight or rope silk. If you work with silk, use a crewel needle, which is a needle with a long eye. (No. 35).

Draw a second line on your sampler a half inch below the other one and thread a No. 5 sewing-needle with a thread of coarse marking cotton.

Take three running stitches so that

stitching is often used as a padding for buttonholing and satin-stitch, which will be described later.

**Darning-Stitch**—This is another stitch which is very often used as a padding, especially for fine work. It is the plain running stitch, (No. 37.) It is usually called darning-stitch in embroidery.

**Satin-Stitch**—Draw three little pointed leaves as shown in Illustration (No. 38). Thread a No. 7 sewing-needle with marking cotton No. 25, and pad the leaves with several rows of running stitches, as shown in the middle leaf. Note that the running stitches are, mostly on the surface is taken up. On very large leaves more than one layer of padding is necessary if a high raised effect is desired.

After the leaf has been padded, start from the extreme left-hand side of the leaf and bring the needle out at the lower edge of the leaf. Sew across the entire width of the leaf. Insert the needle on the upper edge of the leaf and bring it out at the lower edge. The thread should be on the left of the needle. Repeat, keeping the stitches even on both edges of the leaves. The stitches must be very close to each other. This stitch is very commonly known as "solid work."

**Split Satin-Stitch**—Is used on a

quire padding with either chain-stitching or running stitches. The work is then held as shown in Illustration No. 40. The needle is inserted in the upper edge out through the back of the padding to the lower edge. The thumb of the left hand holds the thread down while the stitch is made. The thread should fall toward the right. This stitch is very like satin-stitch only it has a purl edge. The stitches must be taken with care.

After the scallops are worked dampen the material and press with a warm iron. Then with embroidery scissors cut the material below the purl edge of the buttonholing, very close to it without cutting the stitches. Buttonholing for underwear and lingerie waists should be worked in marking cotton No. 25. For hankerchiefs use No. 40 marking cotton.

**Eyelet-Stitch**—Dots and small conventional flowers are often carried out in eyelet stitch. If the circle is very small, a stiletto should be used for the eyelet. (Ill. No. 41.) An orange stick may be used instead of a stiletto. To work an eyelet, run a thread around the outline and pierce the material within with the stiletto until the opening is as large as the outline. Stitches are then taken over the thread outline into the material

(Continued on page 16)

## Don't Blame the Sugar If Your Jelly Doesn't Jell

So many people have the mistaken notion that it is the sugar that makes the jelly jell, but if they would stop long enough to reason a little they would see it isn't the sugar, but the "pectin" in certain fruits that causes the juices to gelatinize.

Some fruits you cannot make jelly from, because there is not sufficient "pectin" in them to cause the juices to jell. Quinces, grapes, apples, currants, etc. are fruits which contain the greatest amount of "pectin;" but to insure jelly success with even these fruits, they must not be too ripe, and should be freshly picked.

If you observe this, and use Utah-Idaho Sugar there is no excuse for jelly failures.



## Reliable Farm Bargains

2 acres on 15th South and 4th East. 4-room house. Chicken coop. Flowing well. \$165 down and balance like rent. Price complete \$1650.

80 acres one-half mile from Tremonton. Is now rented for \$1440 cash per annum. Owner will exchange for a home in Logan as part payment or will sell for cash with a first payment of \$2000. Balance on good terms. This place has a full water right. A new 4-room house, just built this year is also included. Also 4 head horses, 2 sets harness, 1 wagon, 1 white top buggy, mower, rake and sulky plow. Price complete \$13,500. This is a mighty good buy.

40 acres near Tremonton all with full water right in Bear River Canal. One and one-half mile from railroad. Near good roads, good school and in a prosperous built-up farming section. Land is all plowed and levelled. Only \$115 per acre, with ten years to pay. Interest at only 6 per cent. With the new increase in the price of sugar beets, any good farmer can soon become independent on this fine piece of land. Only one-tenth down.

We personally inspect every farm we sell before recommending. This protects you when you buy through us.

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"Land Merchants"

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ATTACHED INSTANTANEOUSLY  
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LEG BANDS for Poultry, Pigeons, Turkeys  
SALT LAKE STAMP CO. Salt Lake, Utah

 An illustration of a small, rectangular ear tag with a hole at one end. The tag has the number "332" and the initials "A.C. BROWN" printed on it.



## Field and Farm

### STABLE MANURE VS. GREEN MANURE.

J. O. Morgan, Texas, Experiment Station.

Whether or not the organic content of soils should be maintained is not a debatable question. The necessity of this is realized by all who are in any way familiar with soil management. However, to determine the most readily available as well as the most profitable method for keeping an adequate supply of vegetable matter in the soil often constitutes a difficult problem for the farmer. The proper solution of this problem requires, first, a knowledge of the advantages and disadvantages attending the application of the most important methods of supplying organic matter. These methods are the addition of stable manure and the use of green manures.

The extent to which stable manure can be relied upon as a source of organic matter will depend first upon the organization of the farm and the type of farming followed. All farmers cannot be live stock farmers. Those who are not engaged in live stock farming must nevertheless maintain the organic content of their soils. In this case the only method available will be that of plowing under green manures supplemented of course by crop residues, such as roots and stubble. It does not follow, however, that the live stock farmer should not at times resort to the use of green manure to enrich his soils. The fact is that most live stock farmers find themselves unable even with the best methods of caring for manure to produce enough to keep productive all of their cultivated land.

The practice so common in allowing cultivated soils to become dead because of the scarcity of stable manure is inexcusable. Likewise the practice among live stock farmers of allowing a portion of their cultivated

soils to become impoverished because of the limited amount of manure produced is bad farm management to say the least. The ideal in live stock farming would be to grow the feed and cash crops in a three year rotation, and to produce manure enough to cover every cultivated field at least once during the rotation. This ideal as far as the production of manure is concerned cannot always be accomplished. In the case it is well for the farmer to keep in mind that one ton of legume hay, cowpeas, soy beans, clover, etc., plowed under is equivalent to four tons of average fresh manure, and that many can grow these legumes who cannot produce sufficient manure.

Farmers say that when hay is bringing a good price, either when fed to stock or placed directly on the market, they cannot afford to plow it under. This is often true. But is it true when the soil is dead from a lack of organic matter and very little manure is being produced? That a ton of cowpea hay plowed into a dead soil is worth more than its market value is no mere hypothesis. It is an agricultural fact. In addition to the organic matter added, which forms the greatest source of value, a ton of cowpea hay adds to the soil more than \$8 worth of nitrogen. One difficulty arises in that on these dead soils it is often difficult to grow the legume. But under these conditions the farmer can well afford to add acid phosphate at the rate of 200 to 300 pounds per acre to his legume crop remembering that the returns from this expenditure will not be measured only by the increase in the crop following this legume, but by the increase in the productivity of the soil for the succeeding three or four years. A dead soil is worse than no soil. It is a means of losing money. Render it productive or abandon it for cultivation.

### PLOW WITH CARE; THERE' A REASON A. C. Army.

The chief reason for plowing is to put the soil in shape to produce good crops. For best results the plowing must be done at the right time. Grain crops in particular need generous supplies of readily available plant food early in the season. Therefore, in the northwest early fall-plowing for grain crops is to be preferred. This allows the needed changes that take place in loosened soil to get started early and to continue until the ground is frozen. The result in productive soils is the accumulation throughout the cool fall months of plant food and this is easily taken up by the grain plants the following spring.

For corn, black loam soil should be plowed in the fall. On the heavier clay soils spring plowing for corn is often preferable.

Good plowing means more than making the field appear black. It means more than making straight furrows. However, a good plowman usually makes straight furrows. In a well plowed field the soil is stirred and pulverized to the depth indicated as necessary by the kind of soil and the crop to be grown; and the stubble and



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### Is Your Wagon Deformed?

It would not be if you had used

## MICA AXLE GREASE

Gives long life to your wagon. The mica makes a smooth bearing surface — prevents friction and wear.

Dealers everywhere.

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bbish are completely turned under where it will be out of the way and quickly decomposed. For most crops, deep, rather than shallow plowing, is the best practice.

To do good work with a minimum of power, plows must be equipped with properly shaped and sharpened shares. A good share allows a plow to run true and little or no effort is necessary to hold it in place.

To turn under all rubbish a good winter properly adjusted is necessary. No stubble or weeds are left sticking up between the furrows where a good winter is used.

Keep the plowshare properly shaped and sharpened. Use a jointer so that all rubbish is turned under completely. Increase the depth of plowing an inch or two each year for several seasons.

#### FARM BUILDINGS.

Clement White.

Whether the farmer will be successful in his endeavor depends to a great extent upon the kind of out-buildings he erects. It costs no more to build correctly designed barns, cow stables, etc., than unhandy structures which will never give satisfaction.

The business farmer takes care to provide accommodations for his horses which will keep them both healthy and comfortable. A barn which is warm in winter, cool in summer and is provided with adequate facilities for drainage and ventilation is desirable. A barn with the above qualifications is within reach of every owner. Before beginning work on a new barn, the builder should consider several matters. It is very important that the proper location be chosen. If possible select a site slightly elevated above the surrounding surface. The barn should not be built near low places where drainage water gathers, unless the owner fills a objectionable sink holes. The aim should be to build the barn where it will be readily accessible from all sides. Frequently it is necessary to grade up the site where the new barn is to stand.

Many men prefer a basement. The basement is generally quite warm; sufficient light is not always admitted. The basement should be well ventilated. A damp, poorly lighted basement is worse than no shelter at all. With little or no extra expense ample light and fresh air may be admitted. If the physical condition of the barn yard surface is not favorable for planning a modern barn, it is advisable to get the assistance of a carpenter or contractor who has had much experience.

When the barn is to have three doors, a basement should be dug. Always make an endeavor to have a south frontage; for the south frontage will admit sunlight every day in the year when the sky is clear. There are many reasons why plenty of sunlight is a necessity. Horses will not contract disease easily if the barn is well lighted. Their eyes will not become weakened. Harnessing and unharnessing horses in a gloomy barn is not a pleasant task. The first essential is plenty of light. It is advisable to plan for a sufficient number of large sized windows; if they are properly protected they will last as long as the main barn.

There are a number of methods for providing ventilation; the property

owner should study the plans best adapted for the type of barn he expects to build, then install the most practical. Poor ventilation is certain to result in unhealthy horses. The horse's lungs are large and consume much air during the course of the night. Unless a fresh supply of air is constantly admitted into the building, bad air will be taken into the lungs over and over again. Distemper, etc., usually attack horses that have breathed foul air.

Drainage is important. Unless the liquids drain from the barn as fast as they are released, the bedding will become foul over night. As a result the horses' hoofs will become saturated with the liquids. The horse that is obliged to stand in wet or filthy stalls for any length of time will be subject to a variety of foot disease which lessen his usefulness. Concrete is being used for barn floor material. Plank floors are still popular. Regardless of the material used the drainage should be looked after.

Convenience is a factor in barn building which should be given due consideration. The barn provided with convenient storage bins for grain, ample mow room, and facilities for watering stock is desirable. The better the conveniences provided, the less time will be required for doing the chores. During the rush season most farmers are obliged to accomplish many tasks in a limited amount of time. It is a great convenience to have the feed supply handy to the feeding alley.

It is advisable to have running water in the barn. If a tank is not located inside the barn, locate it close by. A tank can be located in one corner, and the necessary piping installed, at small expense. The supply of fresh water inside the barn is one of the conveniences which should not be overlooked.

The average barn is provided with a haymow. The haymow makes the horses' living quarters warmer in winter and when filled with hay gives the entire structure stability. The floor of the mow should be made of ship lap or some other tight fitting lumber which will prevent dust and small bits of hay or straw from falling upon the horses' backs.

The foundation of any building should be properly constructed. The barn, in particular, requires a strong, long lasting foundation. Concrete foundations are always desirable if properly made. The depth of the foundation and the width of the wall must be made in proportion to the size of the barn erected. Also the physical condition of the surface has much to do with the foundation. If the barn is built upon a site where the soil is underlaid with rock layers near the surface, the foundation needs to extend only down to the rock layers. If the ground is soft and spongy, a deep foundation is required.

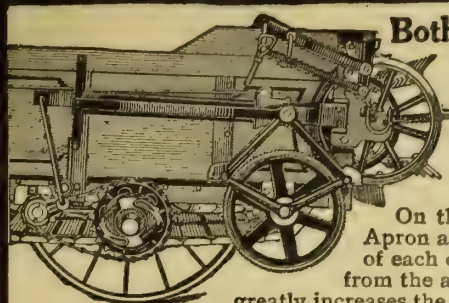
#### THAT JARRED HER

A young couple on their honeymoon are dallying languidly with the grapes at dessert.

She (archly): "And you don't find it tiresome all alone with me? You are quite sure you don't want to go back to your bachelor life again?"

He (earnestly): "Quite, my darling. Do you know, if you were to die to-night I'd get married again to-morrow morning."

## Flying Dutchman Low Down Spreader



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Look at other endless apron spreaders. See how the apron is driven from one end of the Beater? That wastes power and puts an awful strain on the Beater.

On the Flying Dutchman Spreader the Apron and Beater are entirely independent of each other. Each takes its power direct from the axle. You can readily see how this greatly increases the power and lightens the draft.

## Lightest Draft Low Down Spreader

**Beater driven by one wheel—Apron by the other.**

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**Entire Machine is operated by ONE lever.**

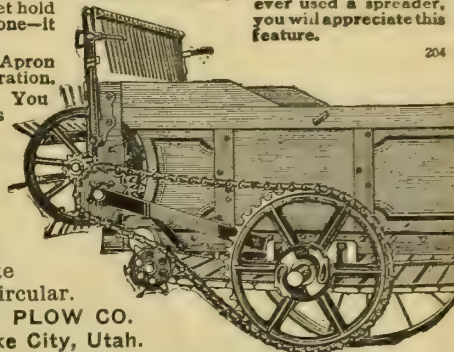
There is no chance for an inexperienced driver to make a mistake and damage the machine. He cannot get hold of the wrong lever—for there is only one—it operates both Beater and Apron.

It is positively impossible to start the Apron until after the Beater has been put in operation.

The range of adjustment is very great. You can spread any amount from 4 to 28 loads to the acre. And in addition there is a reserve speed of over 40 loads—which quickly cleans out the last part of the load.



Ask your nearest dealer to show you this spreader or write us for descriptive circular.  
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Whether the Flying Dutchman is in or out of gear, it is securely locked in that position. It cannot possibly change until you move the lever. If you have ever used a spreader, you will appreciate this feature.

204



#### Enjoy Life More by Farming With a Tractor

**DON'T** spend your time this winter taking care of a lot of surplus idle horses. Sell them and place your order for a tractor that you don't have to take care of. Save the time and spend it enjoying life more and in studying out how to farm better.

Next year your tractor will also save you a lot of hard work. At noon and night turn the switch and you are through. All the extra time it takes to feed, water, harness, curry and bed horses you can spend at more profitable work or in getting more enjoyment out of life. Tractor Farming helps mother and girls too. Makes less hired help and less chores. The whole family can get more time to spend together in the evening. Tractor Farming makes more profits, which means being able to buy an automobile, have more home conveniences and comforts.

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**Advertising Rates**—The advertising rates will be sent upon application.

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Utah Horticultural Society, Utah State Dairymen's Association, Utah State Bee Keepers' Association, Bear River Valley Farmers' Protective and Commercial Association, Agricultural College Extension Department and Utah State Fair Association, Utah-Idaho Millers' and Grain Dealers' Association, Utah Fruit Growers Association.

#### OUR GUARANTEE

We guarantee every subscriber against loss thru dishonesty or attempted swindle by any advertiser in this publication. We do not attempt, however, to adjust trifling differences between the subscribers and honest, responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within thirty days from date of the transaction, and the subscriber must have mentioned Utah Farmer when writing the advertiser.

Every farmer should take two or three good farm papers, should have all the bulletins issued by our station and then carefully read and study all of them.

The dairy commission of a near by state says that one third of the cows in his state are "boarders." Wonder how true this would be in Utah. Keep records and find out. Test the cows for butter fat, don't guess but, know what your cows are doing.

#### THE KIND OF FARMER.

There are different kinds of farmers and usually their crops will tell the kind of farmer they are. Good farmers get good crops, poor farmers get bad crops and the indifferent farmer get the ordinary common crop, one time it is much better than the other. After all don't the man, the one who runs the farm have much to do with determining the amount and kind of a crop to be harvested. The soil, the climate, have their influences but the man has much to do in carving out the destiny of the farm. The man who is making a success studies the soil and knows the kind of a crop to plant. He knows whether it should be tomatoes, potatoes, grain or alfalfa. One man will produce on his farm as much as double as his neighbor, only a fence between them, same kind of soil and other conditions. Why this big difference? Think it over and see if the man does not have much to do with the amount of the harvest.

#### THANKSGIVING DAY.

We who live in Utah have every reason to be thankful. We have been greatly blessed during the past year. It is a good thing that a day is set apart to remind us of our many blessings.

Thanksgiving day is generally observed by nearly every person in the United States. True, that we do not all celebrate it alike, but we all are thankful and express it in many different ways.

Thanksgiving Day started by the Pilgrims developed gradually until 1864 when President Lincoln by proclamation made it a permanent national holiday and now it has become a day when the nation raises its voice in gratitude.

The crops generally speaking are abundant, in nearly all lines of agriculture, in our state. We have in Utah some of the greatest opportunities found any where. The soil is as fertile as the sun every shone upon. We are blessed with good health. We have sunshine, fresh air, and pure water. A God fearing people, working for the interest, not only of our selves, but for our fellow men. We are thankful for all these and many other blessings.

We as American citizens of a great republic have a cause to be thankful. The unhappy conditions of a war-torn world, when nation is against nation in contrast to our peace and contentment is truly a cause for us to acknowledge the blessings that are ours.

Picture to yourself the conditions under which others are living and really is there any place on earth where you would rather be than right in your own home this Thanksgiving Day. Is there a brighter spot on earth, all things considered, than right here where we are living.

So let us enter into the spirit of the day and be truly thankful, and hope that the spirit of peace may find its way into the hearts of men in the troubled nations of the world.

#### THE CALLING OF A FARMER.

The farmer may not always receive his full compensation for his labor and capital, but he has the satisfaction of knowing that he is following the most honorable, lofty and independent calling of any in the land.

We have the high authority of history, sacred and profane, for declaring that agriculture is a dignified and time-honored calling, ordained and favored by Heaven and sanctioned by experience, and we are invited to its pursuit by the rewards of the past and present and the rich promise of the future. How many dark recesses of the earth has agriculture illuminated with its blessings; how many firesides has it lighted up with its radiant gladness; how many hearts has it made buoyant with domestic hope; how often like the good Samaritan has it alleviated want and misery while the priests and Levites of power have passed by on the other side? How many family altars and gathering places has it erected; how many desolate homes has it cheered; how often has its peaceful and gentle influences filled the land with plenty and made it vocal with praises and thanksgiving?

#### RURAL CREDITS.

One of the problems, and a very important one, now before the American public is the question of rural credit. Many farmers have been paying too much interest on borrowed money. Just as serious a problem in connection with the interest

has been the length of the loan. The ordinary bank will not make loans for more than 6 months and so the farmer if he gets his money from the bank, really has to start as soon as loan is made, to prepare to pay it off. Now what the farmer wants is money at a low rate of interest with a reasonable length of time to pay it and no strings tied to it in the way of bonuses, commission, etc. On the other hand the farmer will have to furnish good security so that the one loaning the money knows his loan is a good one.

Conventions, conferences and discussions are being given over to this question and there is no doubt but what there will finally be brought about the desired results for both farmer and money lender.

Many farmers could profitably use cheap money, to buy pure bred stock, improved and labor saving machinery and make improvements on the farm and in the home.

#### THE AMERICAN HEN

With eggs selling at 50c to 60c a dozen many of us are wishing we had a number of hens that were laying. Just at the present time considerable interest is being taken by leading poultry men in cause of the American hen. A number of Utah poultrymen joined the national officers of the American Poultry Association in their trip to California where they are going to hold poultry conventions. The President of the National Association is quoted as saying that the "hen business" now amounts to over a billion dollars. According to the census of the United States in 1910 there was produced on the 6,000,000 farms 35,000,000 eggs annually. About an average of 70 eggs from each hen a year. American eggs sell for \$700,000,000 each year; American hens, in number about 500,000,000, are worth, about 50c each. In other words we now put the poultry industry on a yearly value of about a billion dollars.

On the average farm little or no attention is given the hen. No effort is made to produce eggs beyond the ordinary spring yield. If we realized the fact that it would mean millions of dollars for the farmer if we just got each hen to lay one more egg each year, it seems that he would take more interest.

Producing eggs when eggs bring good prices has been up to within the last few years, almost universally deemed impossible, due to early molting of the layers, poor layers, poor housing conditions, little attention to feeding and less still to breeding.

Egg laying competitions into this country, breeding for eggs in greater quantities has taken a firm hold on poultry raisers and, as near as can be, scientific feeding and housing have run hand in hand.

The average yearly output of the American hen and the magnificent yields secured in egg laying competitions, wherein methods have taken the place of a happy-go-lucky, anything-will-do practice, will convince the most indolent of the wisdom of an almost costless system in breeding, feeding and housing.

The farmer of today reads, thinks and invests for himself. He does not plan in the right time of the moon, but in the soil under favorable moisture and temperature conditions. He is no longer the dupe of the ignorant, but a sensible, sane, intelligent citizen, the equal of any in the land.



# A Visit to a Cold Storage Plant

By Ben R. Eldredge.

In the food supply of the cities of the United States and the world, cold storage is an important matter. I visited one of the cold storage warehouses in Chicago. It was a great square pile of brick raising 175 feet without windows above the railroad tracks and streets around it. It contained 16 floors and one and one-quarter million feet of storage space. It was built of brick, concrete and steel and not a stick of wood entered into its construction, the different floors were reached by large electric freight elevators and, as I passed from floor to floor, I found the space all filled with human food—about \$4,000,000 worth. One hundred carloads of eggs was one of the items. The eggs, I was told, were now (November) passing out, but their place was being taken by apples and what a lot of apples there were! They were in boxes and barrels—apples from the east, State of New York, in barrels; apples from the west as far as Oregon, in boxes; and the aroma of those apples was the most pleasing thing I had found in all Chicago, for Chicago might be called a city of many odors. There were also pears and other fruits and great quantities of butter and cheese, also of beef, mutton and poultry.

I was shown a large number of clean looking barrels which I was told contained condensed milk. The barrels contained about 600 pounds each and is put up in this form for export to Europe, where it is repacked in tins for army and family use. It is also used in the United States by some of the confectioners and ice

cream makers. The temperature on the different floors of the building varies according to the class of goods intended to be stored there. Some of the floors are called coolers and others freezers. The "coolers" are held at from 28 degrees to 30 degrees Fahrenheit, but the "freezers" are much colder, going as low as 15 degrees below zero. It was in the latter where the meats and poultry were stored. While in the freezer I buttoned up my coat and kept moving. At one place a barrel of poultry had been opened and left so it could be examined. I picked up a chicken frozen stiff as a stick. He was dressed with head and legs on. I took him by the legs and rapped his head against a nearby barrel just to see how hard he really was, but I was a little startled when his head flew off like a chip from an icicle. I stuck him back in the barrel and began to get out of there in a hurry, for I felt like my ears might be chipping next. In my hurry to get away, I took a wrong turn and was confronted by a good size black bear standing in an aisle with his head raised looking intently in my direction. My guide saw my startled look and spoke none too soon saying, "Don't be afraid he is frozen too" and he had been in storage since last February but had been frozen in a most life-like attitude. And they told me there was another bear in the warehouse somewhere that had been there since the fall of 1913. I saw several mutton that had been held in a frozen state two years and a pile of plums in boxes that were

frozen hard as pebbles and had been in that condition since the summer of 1913, also raspberries that dated back to June of the same year. These were pie fruits. Sometimes the bakers store fruit for pies, freezing being a cheap, easy way of preserving some varieties for their purpose and it is claimed a better flavor is retained than in preserving by any other means. Of course when they are taken out of storage, they must be used immediately.

The temperatures are very evenly maintained on all the floors and every four hours night and day records are made of thermometer readings in different places on every floor or room.

The warehousemen who take care of the stock are all Polaks and dress for the job. In one of the freezing rooms I spoke to one man, a short, husky fellow, who had on many layers of clothing, as I could discern at his neck, and whose feet were swathed in burlap and head and ears protected with a heavy woolen cap. He told me he had been with the company for 16 years. The men become accustomed to the work and all seem quite rugged, but I was informed that they suffer greatly during the heat of the summer nights. They work nine hours a day.

In the basement of the building I found the machinery that produced the cold. The system was all in duplicate so that a break in any place of a machinery part would result in no cessation of the refrigeration, for another machine could be instantly started to take the place of the disabled one and, as a power, electricity could be substituted for steam or vice versa and it took 1000 H. P. to do the work. It was a big concern but there are some in Chicago eight times larger than this one.

There is an association of cold storage companies having somewhere near 50 members. These companies report once a month to the central office of the association the amount of the various commodities they have on hand and on November 1st, 1914 there was in the warehouses of the association 21,000,000 pounds of butter more than on November 1st, 1914, one year ago. This would indicate a development for the butter industry, but it may also and probably does indicate that many of the large packing companies, not members of the association, which a year ago had great quantities of their own butter stored in storage plants they controlled are this year using that space for packing house products and are now storing butter in the customs storage plant; but either way you look at it, 21,000,000 pounds of butter is an interesting little item, isn't it?

## Boys' and Girls' Club Workers Appointed.

Ben R. Eldredge has been appointed to follow up work in the high school milk testing clubs. Prof. R. J. Evans will work with the boys' high school seed testing clubs in giving the necessary instructions and suggestions for carrying on the work. Miss Clarie Parrish has been appointed Assistant State Leader in the boys' and girls' club work in cooperation with the U. S. D. A., to succeed Carl L. Anderson.

Do not allow your chickens to collect mites or lice.



## What Dry Feet Mean to Health

By The Oil Philosopher.

Undoubtedly, a good part of winter sickness comes from damp and cold feet. To keep out the wet and slush of the winter months, the shoes of every member of the family should be waterproofed, with Duck-Back Shoe Oil, so that the feet may be kept dry and warm.

## Duck-Back Shoe Oil

not only keeps the feet dry and warm, but it preserves the leather in the shoes.... Nothing that comes into contact with shoes is more destructive than water, because it forces out all the oil in the leather and causes it to dry, crack and rot.

Duck-Back Shoe Oil is a natural leather oil; it prevents water from penetrating farther than the surface. Protect your family from sickness by protecting their feet from dampness. A frequent application of Duck-Back Shoe Oil does the work.

If your dealer should be out of stock, write the Utah Oil Refining Company, Salt Lake City, and it will see that you are supplied.

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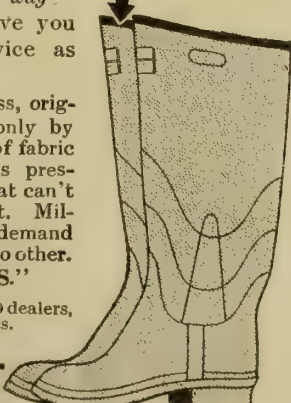
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There is only one Hipress Rubber Boot and Shoe, and it is made with the RED-LINE 'round the top.



## THE HOME

### The Thanksgiving Dinner

By Ivy Thomas.

The question that is being asked by many housekeepers about this time is in regard to the thanksgiving dinner. What shall I serve? How shall I prepare it, etc? There are so many suggestions for this annual dinner that it is more a question of selection and ones opportunity to secure what you like. In most farm cellars are bottled fruit, pickles, vegetables and other good things and the danger in many homes is that too much will be served. An overloaded table is not very appetizing nor can it be arranged with taste.

A very good plan, and one that holds good not only on Thanksgiving but at all times, is to decide on what kind of meat you wish to serve and then serve those things in the way of vegetables, fruit and pickles that go nicely with it. Two kinds of vegetables, one kind of fruit stewed, baked or fresh, and one kind of pickle are plenty to serve with meat and the noodles, dumplings or dressings that go with it.

If you are going to serve turkey, mashed potatoes, baked beans, kidney or butter beans, stewed cranberries, oyster dressing and fresh fruit of some kind go nicely with it. If the meat be a nice fat chicken make the old-fashioned dumpling, made like sour milk biscuit dough.

If the meat be young friers, then you want sweet potatoes, corn or macaroni, baked apples and scalloped oysters. If the meat be a pot roast of pork, one vegetable should be turnips seasoned with a small piece of pork. A good cook is not the woman who has everything to do with, but she is the one who can make good dishes out of what she does have, and no woman can do this as easily as the farmer's wife, for she has plenty of milk, cream and butter. Elaborately served dinners are giving way to well arranged simple dinners which are just as attractive and satisfying without the burden of over-eating.

Our Thanksgiving Dinner will be a failure unless we eat it cheerfully, unless there is a spirit of love and goodfellowship. The arrangement and decoration of the table will help, it can be done neatly and attractively as if in homes of great wealth for what is it the farmer's wife has not in way of decoration? Heap fruit in shallow basket with nuts, sturdy oak leaves, red berries from the wild rose bushes with bit of green cedars, and what is lovelier?

Above everything else, have your heart so full of the Thanksgiving spirit that it will overflow creating an atmosphere of love and contentment about you and it will take possession of the hearts of your family and guests.

#### How to Roast a Turkey.

Clean, dress and stuff the turkey with the following dressing: Take slices of stale bread (do not remove the crust), dip in cold water and chop in a tray; season with salt, pepper, sage and a little minced onion if liked. For half a loaf of bread soften a teacup of butter and stir into the bread; add two eggs and beat in well.

Stuff the turkey with the dressing but do not crowd it in. Place the bird on a rack in a dripping pan. Rub the entire surface with salt and a half cup of butter rubbed creamy with one one-fourth of a cupful of flour. Dredge the bottom of the pan with flour, place in a hot oven, and when the flour begins to brown reduce the heat. Add two cupfuls of boiling water and baste. Baste the turkey every 15 minutes while cooking. Do not let the water boil out, but add a little from time to time as needed. Turn the bird frequently that it may brown evenly. A 10-pound turkey requires from three to three and one-fourth hours to cook.

#### Brown Gravy.

Skim from the liquor in which the turkey has been cooked seven tablespoonfuls of fat. Place in a skillet with eight tablespoonfuls of flour and place over the fire until brown. Then gradually pour over this four cups of water in which the gizzard, liver and neck have been cooked. When it is thick and smooth salt and pepper, and pour in one-half cupful of sweet cream.

#### Roast Turkey With a Blanket.

Select a plump young turkey and clean carefully at least one day before cooking. Stuff with any kind of dressing preferred. Pour in enough hot water after the turkey begins to cook, to keep it from burning to the pan, and baste often. Turn the bird frequently so that it may be browned regularly. About an hour before dinner make a blanket of baking powder biscuit crust, made rather stiff, and with less shortening and baking powder than for biscuit. Roll out about one-fourth of an inch thick and spread carefully over the turkey. This keeps in the juice and makes it beautifully tender. Baste often, keeping enough water in the pan so that there will be enough for gravy. Cut the blanket into nice pieces and serve with the turkey.

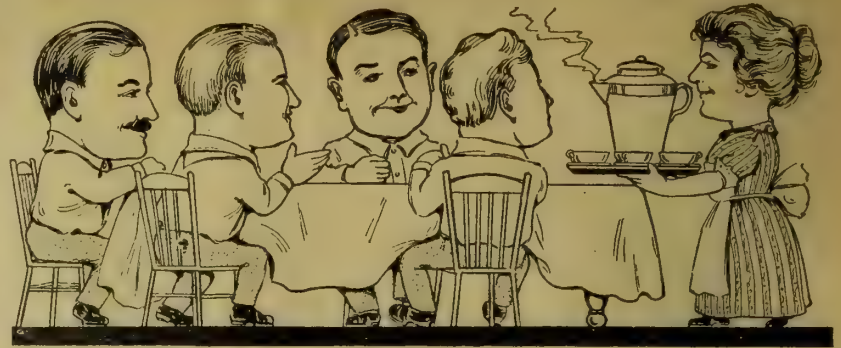
#### Cranberry Sauce.

Pick over one quart of cranberries and put on the stove with one cup of boiling water. If any berries rise to the top take them out, as they are likely to be poor ones which have escaped your eye in picking them over. Immediately add two cups of sugar, and stir until it is dissolved, which will be before the whole contents of the pan boils. Boil whole for five minutes or less, for the berries will commence to pop within a minute, and may be all broken in four minutes. Let boil up over a good hot fire skim, and if the handsomest kind of sauce is wanted put the whole through a sieve. This will stiffen somewhat, but not to a jelly, whether sieved or not.

#### Cranberry Jelly.

Cranberries, like most other fruits, are nicest if cooked in small quantities. Put a quart of picked over cranberries on to cook in a cup of boiling water; boil up and sieve, then just boil up again and add two cups of sugar, but do not cook any after it is added. Stir until it is thoroughly dissolved, then pour into molds rinsed with cold water.

Cranberries will not jelly at all when cooked for this brief time, if



## The Economical Beverage-Food

"Here's what you have all been waiting for—your cup of Ghirardelli Chocolate."

Ghirardelli's Ground Chocolate is as unusual for its deliciousness as for the economy that follows its use. Serve it to men whose strength must be sustained for productive work—a cup full every day.

A great food scientist says:

"Cocoa (Ghirardelli's Ground Chocolate is a blend of finest cocoa and pure sugar) might well be called the vegetable egg; but in fact cocoa contains a larger percentage of nutriment matter than the egg."

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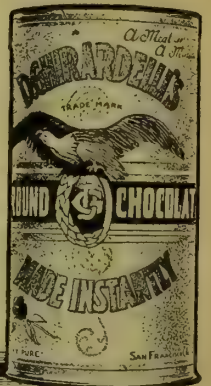
In ½-lb., 1-lb. and 3-lb. hermetically sealed cans. There's a double economy in buying the 3-lb. can.

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You are invited to visit the Ghirardelli Pavilion at the Panama-Pacific International Exposition and see a model chocolate factory in operation



the sugar is cooked with them. One of the best cooks in the country makes this statement. Another, accepted as of equal authority, advises cooking the two together for five minutes, but under ordinary conditions she is certainly wrong, and the first right. Long slow cooking brings out the jellying qualities in most fruits, but in the case of the cranberry it brings out the bitter as well, therefore the boiling water at first, and the least possible time on the stove.

#### Pumpkin Baked Whole.

A pumpkin or squash baked whole seldom appears on any table, but when it does it is the central motif in the entire scheme of table decoration. Though our prim Puritan grandmothers baked their pumpkins in immense brick ovens, the modern range will serve us as well.

Cut out a hole in the stem end of a medium-sized, well-shaped pumpkin large enough to permit the hand to enter to remove the inside seed and pulp. After removing the pulp replace the sliced-off portion and put the pumpkin in a deep pan which is two thirds full of boiling water. The oven into which the pumpkin is now placed should have a steady, even temper-

ature. Usually, if the pumpkin is put into the oven in the morning, it will be done by evening. When it is soft pour off all the water, then put inside the pumpkin one-half cupful of butter, three cupfuls of brown sugar, and three tablespoonfuls of mixed spices. Let it remain in the oven one-half hour longer.

#### Creamed Tomato Soup.

Put a pint of milk in a double boiler and when it is scalding hot add thickening previously prepared, a tablespoonful of butter stirred to a paste with a tablespoonful of flour. After this has boiled up, pour in two cupfuls of strained, cooked tomatoes, seasoning with salt and pepper to taste. If the tomatoes are very sour it may be well to add a pinch of baking soda before mixing them with the milk.

#### Celery Salad.

Chop equal amounts of raw apples and celery, add chopped nut meats, and when thoroughly chilled, cover with salad dressing. Serve either in individuals or in salad dish.

#### Oyster Dressing for Turkey.

One stale loaf of bread cut into small pieces, one-half cupful of melted butter, one small onion, chopped, and a little chopped celery. Season with



salt and pepper, and pour over all the liquor from one quart of oysters. Mix thoroughly then add the cupful of white sauce which is made by thickening a cup of milk with a teaspoonful of flour. After pouring this mixture into a buttered dish, season with butter salt and pepper and put into a hot oven for ten or fifteen minutes. Some grated cheese sprinkled over it, well browned, will add to the appearance of the dish.

Nut Breau.

To four cupfuls sifted flour add six teaspoonfuls baking powder, one teaspoonful salt, one cupful chopped nut meats and one cupful sugar. Add two well-beaten eggs and one cupful sweet milk. Knead very thoroughly and put in tins. Let stand for one-half hour, brush the top with sweetened milk and bake one-half hour.

Doughnuts.

One and one-third cups of granulated sugar, two eggs, one cup of sour cream, flavoring, and one scant teaspoon of soda dissolved in a little cold water. Mix rapidly and use enough flour to make a soft dough. Roll out, cut and bake. Roll in sugar while warm.

Currant Buns.

Use the above recipe but before baking add one cup of currants washed and dried. Instead of rolling out take small lumps of batter on the spoon and drop in the hot fat. If too thin they will go to pieces. They should

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be of the consistency of doughnuts ready to roll out when baked.

Pumpkin Pie.

Two cups cooked pumpkin, three-fourths cup brown sugar, two cups milk, three eggs, two tablespoonfuls molasses, one of melted butter, one teaspoonful each cinnamon, allspice, and one-half of ginger, pinch of salt. This makes two big pies.

THANKSGIVING A TIME FOR FAMILY REUNIONS AND GREETINGS.  
(Continued from page 1)

the individual self-centered; but we can at least on Thanksgiving Day keep up something of the old spirit and cement the blood tie by writing letters—good, old-fashioned letters untouched by the business spirit, especially to father and mother as well as to brothers and sisters.

Gifts may be sent as well as greetings; the son or daughter in California may send fruit or flowers or whatever may be best in the state to which they have migrated. Especially dear are these letters and remembrances to father and mother, who may perhaps live in the old home, the nest from which the nestlings have flown, and who are perhaps once more alone where they began to keep house, in the home full of sad as well as sweet memories. Their chief joy in life is the memory of the past and the knowledge that they still have their large place in the affections of their children and are held in loving remembrance by the grandchildren in whom they are living the lives of their children over again, and their own lives also. Where Thanksgiving can not be a time of family reunion, let it at least be a time of family remembrance.

About The First Thanksgiving.

Many of us have probably forgotten how the turkey came to play the star part in the Thanksgiving dinner. For that matter, how many ever knew the true significance of this delightful custom?

The father of the day, pious old Governor Bradford, thought it would be a great thing if the folks of Plymouth colony should eat together when the frost was on the pumpkin and the fodder was in the shock.

He commanded the colony's valiant sons to go into the forests and shoot a sufficient mess of venison and wild turkey.

Next arose the problem of a common eating place. But that solved itself, for colonial Massachusetts had but one common place of adequate community assembly, the out of doors.

So the wild turkey, duly stuffed and baked, and the venison were taken, with fitting accompaniments, under the trees and joyously dispatched at a feast for all, including King Massasoit and ninety friendly Indians. So well did they enjoy the common feast that they kept it up for three days.

It was not, therefore, as with us, primarily a family, but a community, function; the nearest that the pious pilgrims could come to a democratic festival. When we modify it to a service in a church and a spread around a family board, we reduce the fine old function to less than its original intent.

The family dinner and the church service have grown into traditions too well rooted to be upset, even if there were any anxious to upset them. They



Abundant Light For the Kitchen

A Rayo wall bracket lamp, or RAYO table lamp fitted with an open ring bracket makes an ideal kitchen light. It is out of the way where it can't make dirt or tip over, and it gives you plenty of clear, mellow light to work by.

RAYO lamps are easy to light, easy to clean, easy to rewick and wonderfully durable. Dealers everywhere carry them.

THE CONTINENTAL OIL COMPANY  
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Albuquerque Denver Butte Salt Lake City Cheyenne Boise Pueblo



give a useful and intimate spiritual touch.

But lately, in a few places, there has come into usage an added celebration more in keeping with the founder's intent.

Some folks are opening our common meeting place, the public schoolhouse, the churches and inviting everybody to come and join in a meeting or program. This is commendable and especially true, the spirit of Thanksgiving is emphasized and carried out in this gathering. Such meetings will restore to our time much of the significance which the first Thanksgiving day had for the hardy colonists.

For the battle of our period, in fortunate America, is not with painted savages armed with scalping knives, nor with the rigors of the wilderness. Much less is it Europe's battle with high powered tools of slaughter by wholesale. Our battle is with prejudices, misunderstandings, the evil spirits which spring up among folks who are artificially kept apart.

It is more necessary and advisable to groom cows than horses. Yet how many farmers take this care of their cows?

An ambition to excel is necessary to great achievement in any line.—Exchange.

THE TURNING OF THE WORM.

Mrs. Smith was repeatedly reminding her hubby that she owned the silver, that she owned the furniture, and so on, until poor Smith almost wished he had married some poor girl. The other night Mrs. S. woke in alarm. Strange sounds were heard in the lower part of the house, and, quickly rousing her husband, she cried:

"John, John! Get up! There are burglars in the house!" "Eh?" inquired Mr. Smith, rubbing his eyes.

"Burglars downstairs!" repeated Mrs. S.

"Burglars?" said Smith, as he turned over "Well, I don't own anything."

An Irishman was walking through a pasture when a bull rushed up and tossed him over the fence. Picking himself up quickly he faced the animal and said with suppressed wrath—"If it wasn't fer year bowin' and yer scrapin' and yer apologizing I'd o'thought you did that on purpose!" —Exchange.

NO CONTROL.

Footballer (walking the floor with his youngest): "If the manager could see me now, I bet I'd get it hot."

Wife: "Why so, dear?"

Footballer: "I don't seem to have any control of the bawl at all."



## ORCHARD AND GARDEN

### SUGGESTIONS FOR PROTECT- ING THE FLOWER GARDEN.

By Emil Hansen, Florist Utah  
Agricultural College.

Now when the frost has visited the garden, questions arise as to how shall we protect our flowering plants and shrubs.

A little work done at the right time and in the right way will often save a lot of valuable plants. Such plants as Dahlias, Cannas, Gladiolus and Caladiums should, if not already done, be dug up and the bulbs stored in a cellar where the variation in temperature is not too great. A temperature not under 45 degrees and not over 55 degrees is best. The roots may be hung up or laid on shelves or other places where the air can circulate through them.

Such plants as Peonies, Delphineum, Poppies, Hollyhocks, and many other so-called hardy perennials, will live through the winter in the ground. These however, should be covered with 3 to 4 inches of manure, which in the spring can be dug down around the plants.

Around Roses of hardy varieties there should be placed a heap of manure, which in the spring when the danger of frost is over, should be spread and dug down around the roots. Tender Roses should first be wrapped in burlap. Do not cut the Roses back in the fall. This mistake often causes the hardiest varieties to freeze down during the winter.

### METHOD OF SELLING

#### POTATOES IN CALIFORNIA

In order to sell any product successfully in a certain market the producer must meet the condition of that market. It will be interesting to many of our readers to know how potatoes are sold in San Francisco. A Utah man now a student at Berkley writing home says:

Potatoes generally find a good market here in San Francisco, yet it seems that very few potatoes outside of California are shipped in. A car or so arrived from Idaho last spring, but they were frost bitten, and were not received well on the markets. Potatoes are sold by the box or basket the top ones being layered, something like cherries or strawberries. Since they are clean and white their appearance is much more pleasing than when they are sacked and placed on the market in the ordinary way. In fact, even in sacks, the potatoes are layered at the top. The sack is filled absolutely full, then rushes or some form of vegetation are placed over them long stitches are made, but the sides of the sack are not drawn together. Thus the potatoes are exposed. In some cases firms will substitute placards bearing their trademark for the rushes.

Shipping is not done in baskets and boxes however, sacks alone being used, but before the potatoes are placed on the retail markets, they are sorted and placed in boxes and baskets as already mentioned. It surprised me to find out that it paid to take the time to handle the potatoes in this way.

In the fields, a very wasteful method of handling the potatoes is in vogue. Only those potatoes large enough to sell are picked up; the others remain-

ing on the ground. Not only is this a procedure wasteful, but by it diseases quickly gain a foot hold, and large areas are now losing their reputation for being great potato growing sections.

Speaking about potato diseases, it seems that California has about every disease that Utah has, and then some more. In my experimental plots this year, I have had a great deal of trouble with the potato tuber moth. Utah growers should think themselves fortunate that this pest had not gained a foothold there.

### IMPORTANT LECTURES

#### FOR A. C. ROUND-UP.

That the potato situation in Utah is getting desperate is shown by the fact that the Utah Agricultural College will have four potato experts to give helpful talks at the State round-ups this year. They are A. U. Pratt of the U. S. D. A.; Lon D. Sweet of Carbondale, Colorado, where he has one of the most extensive potato farms in the west; Mr. W. H. Olin, agricultural expert for the D. and R. G. R. R., and Prof. Geo. R. Hill of the College Botany department who has made a special scientific study of the potato diseases and who knows by experience how to destroy them.

### ABOUT DOUBLE-TREES

Utah Farmer:

How should a double-tree stick be bored so as to give a small horse the proper amount to pull according to weight of horses? With a larger horse? For example a 1200 pound horse and a 1000 pound horse.

S. V. CARTER.

Answered by C. R. Humphreys.

A double-tree should be bored in such a way that the three holes are in a straight line. If this is not done one horse will have more of a load to pull than the other. On some so called "standard eveners" this mistake appears, and very often one horse will be slightly in advance of the other, the result of which means that either one or the other will have more than half of the load to pull. If the two horses are unequal in weight the holes should be bored so that the weight of one horse times the distance from the single-tree to the center hole is equal to the weight of the other horse times the distance from his single-tree to the center hole. In other words, if the weight of the horse on one side increases as compared with the weight of the other, his leverage should be decreased in the same ratio that his weight is increased above the other horse's.

Utah Farmer:

Gentlemen:—Do you advocate the irrigation of alfalfa land during the fall? Have any experiments been conducted along this line and what have the results been?

Respectfully,

A Subscriber.

Answered by Dr. F. S. Harris.

It is sometimes a good thing to water alfalfa in the fall particularly if it has been allowed to become dry before the last cutting. Care should be taken, however, not to have the land too wet when heavy freezing

## 1,500 Acres of Land

—AT—

### Bluffdale and Riverton

Salt Lake County owned by Jordan Valley Dry Farm Co., is

### Now Offered For Sale

with water from the two new canals. 750 acres of this tract of land was sold this spring to residents of Herriman and Riverton in ten days.

120 acres of the Bluffdale Station of the Orem Electric Interurban are retained for town purposes and each purchaser of land is given an opportunity to buy a pro rata interest in this land at same price as other land.

Price of land and water per acre:

**Under Utah Lake Canal**  
**\$115.00**

**Under Provo River Canal**  
**\$80.00**

All reliable persons who earnestly desires to own a farm in Salt Lake County will be given such terms as their circumstances demand. Deferred interest for two years, 6 per cent; thereafter 8 per cent, on or before ten years' time.

Francis W. Kirkham, phone Hyland 349-J of Salt Lake City, a director of both canal companies is sales agent and for two weeks will be at Geo. H. Dansie Hotel, Riverton, Utah, Phone Midvale 18-R3.

Or inquires may be made of W. R. Wallace, Salt Lake City, Utah, or Oscar F. Hunter, Salt Lake City, Utah. Thomas Page at Page-Hanson Store, Riverton, Utah, Wm. C. Crump Sr., Bluffdale, Phone Midvale 17-R1 or Thomas Butterfield, Herriman; Phone, Midvale 120-R5—in fact all residents of Riverton, Bluffdale or Herriman, Utah.

comes on or part of the crop may be killed.

Provo, Utah.

Utah Farmer:

This last year I had a garden of potatoes—there was considerable wilt. What I want to know is the kind of crop to plant for next year. Ground dug this fall and in good condition. Shall I plant carrots, mangels, corn, beans, etc.?

Answered by Dr. F. S. Harris.

Any of the crops you mention could be planted as the potato disease would not interfere with them. I should plant the crop that would be most profitable.

Don't burn the leaves, use them as a fertilizer.

## FOR HOME

For your own table, in your own kitchen, use those products that are made at home—you have a double benefit, for the best quality is secured and your money stays at home to come back to you through trade channels.

**USE TABLE AND  
PRESERVING SUGAR**



**RECLAIM THE WASTE LAND.**

Here is a story the State County Agents are telling and you should know it. A farmer living at Benjamin, Utah, had  $4\frac{1}{2}$  acres of waste alkali land from which he received small or no returns. He seeded it to sweet clover and harvested 3600 pounds of clover seed which he sold for 11 cents netting him \$390.00. Four and one-half tons of clover hay were sold for \$36.00 making a total of \$426.00.

The clover crop yielded large returns besides taking the alkali from the ground. There are many waste acres that could be made to do the same thing. Ask the County Agent about it. He is the man who gathers facts about the best things that the farmers are doing and is always willing and glad to pass them on for every farmer's benefit.

**CARE PREVENTS ACCIDENTS WHEN BLASTING STUMPS**

When blasting stumps large quantities of dynamite will be used this fall, and unless much care be taken many accidents will be reported.

Here are some of the precautions which are being urged by Carl Livingston of the University of Wisconsin, who for several years has been engaged in land clearing in this and other states:

"Don't investigate a misfired hole for the rest of the day—work in another part of the field.

"Don't allow dynamite cases to shift and bounce or to rub against iron bolts ends when hauling.

"Don't store dynamite or caps together or place either of them in a valuable building.

"Don't store fuse, caps, or dynamite

in a damp place, or where they will be handled by children, or disturbed by chickens, cats, or mice.

"Don't use a smaller cap than Number Six.

"Don't keep dynamite too long—its usefulness diminishes.

"Don't push the fuse into the cap—ease the cap carefully on the fuse.

"Don't try to draw a misfired charge from a hole—shoot another off alongside it.

"Don't thaw dynamite by placing it in hot water or before an open fire.

"Don't cut the fuse with dull tools.

"Don't 'crimp' on the caps with your teeth, a knife, hammer, or a rock. Use a crimper, made especially for the purpose.

"Don't use a cheap fuse, and never cut it too short—that's dangerous economy.

"Don't have anything except a watertight connection between cap and fuse in wet work—smear the joint with soap, tallow or axle grease.

"Don't tamp the hole with an iron bar—use wood.

"Don't tamp hard until at least seven inches of well pressed soil is over the charge.

Time now to overhaul your poultry buildings, fumigate, whitewash, renovate soil on floors, patch up leaky roofs, and generally prepare for fall work. Don't delay until time for making up your breeding pens keeps you busy.

Read the advertisements in this issue of the Farmer.

**FATTENING POULTRY.**

Few farm chickens carry sufficient flesh to bring top market prices. Exercise and fat do not go together. Before marketing, free range chickens should be penned and fed a special fattening ration for at least two weeks before going on the market. The fattening ration suggested is composed of two parts corn meal, shorts and ground oats (with the hulls sifted out). Wet this mixture down with skim milk or butter milk and feed the penned chickens as much as they will eat without wasting. Fatted hens sell for 4 or 5 cents more a pound than free range hens. The difference in cost of feeding is less for the free range hens, but the extra weight of the fatted hens plus the difference in price per pound pays a big profit on the increased cost of fattening.

The use of water-glass for preserving eggs is safe, provided eggs are sterile and perfectly fresh. In using them as boiled eggs, remember the "glass" makes an air-proof coating, and the steam generated in boiling is liable to break the shell. Avoid this by drilling with a needle one or two small holes in each egg.

A liberal supply of thoroughly dry soil for dust baths is important. No better time than now. A good way is to have a platform on which you can spread a quantity, exposed to the sun, but kept from showers, and stirred occasionally till dry. Then store in boxes, barrels or bins for future use of your poultry.

**FOR SALE**

One Registered Jersey cow, 6 years old, just freshened, 35 lbs. milk per day. Test 5.4. Fine big well balanced udder. Holds out well to the end of lactation period.

Reason for selling is that I have no stable room.  
**DR. WALTER T. HASLER**  
Provo, Utah.

Have you renewed your subscription to the Farmer?

**A MISUNDERSTANDING.**

The guest came down to breakfast sleepy and wild-eyed, but the hotel proprietor cheerfully queried:

"Did you enjoy the fluet-playing in the room next to you last night?"

"Enjoy it? I spent half the night pounding on the wall for the idiot to stop!"

"Goodness! Why, Herr Wiffler told me that he played over all the tunes he knew four times because the person in the next room encored every one."

**THE GIFT OF REPARTEE.**

Sergeant: Now, then, don't you know how to hold a rifle?

Recruit: I've run a splinter in me finger.

Sergeant (exasperated): Oh, you 'ave, 'ave you Been scratchin' yer 'ead, I suppose

# Six Percent Money to Be Loaned

## On 5 to 35 years time, with no worry of foreclosure

### HOW WE WILL BE ABLE TO LOAN MONEY AT 6%

We take first mortgages put them together, issue bond upon them, sell the bond, lend that money, take first mortgages, issue a bond and sell the bond and repeat up to 15 times our capital and surplus.

The Inter-Mountain Rural Credit Association will apply these principles to the mortgage business of its members.

A large number of mortgages given by the members to secure loans will be used as the basis for the Association bonds. These bonds will be sold.

The Association will never sell a mortgage given by a member but ALL these mortgages will be the security of the bonds of the Association.

All the mortgages are security for ALL the bonds issued and there must always be mortgages at least equal in value to the outstanding bonds.

In addition to having the bonds secured by an equal amount in mortgages, \$50 of each \$100 collected for the shares will be set aside as a Guarantee Fund, to further secure the bonds of the Association.

The bonds of the Association, thus secured, will be one of the highest class bonds issued in the United States, and will allow the Association to secure capital for its members at the lowest possible rate.

### SEVEN AND THREE-TENTHS PERCENT

a year will pay a loan from us, both interest and principal in 35 years, without commissions, renewal charges, or other expense, and you may pay off your entire loan any time after five years.

On a loan of \$1000, \$73 a year pays both interest and principal. At 8 percent you are paying \$80 a year for interest alone and at the end of the time you owe the principal of \$1000. Can we not explain our plan to you?

This is a Co-operative Association, therefore, you must necessarily become a shareholder in order to enjoy the advantages it has to offer.

Each share of stock will entitle you to a loan of \$1500.00. Your share of stock will net you annual dividends. The stock will cost you \$100 per share, \$50 down, \$25 in 5 months and \$25 in 8 months without interest.

The sooner you join the association the sooner you will get your loan.

Call or mail a postal card today to the

**The Inter-Mountain Rural Credit Association**  
McINTYRE BUILDING. SALT LAKE CITY, UTAH.



## POULTRY

### FIRST YEAR'S FEEDING TEST AT THE UNIVERSITY OF IDAHO, 1914-1915.

The purpose of this experiment is to test the value of different feeding rations, to determine the influence of rations upon egg production, general condition of the fowls, weight of eggs, and to determine the cost of maintaining laying hens (for best results under Idaho conditions.)

Farm practice generally is to allow fowls to rustle for themselves and as a rule they are fed the feeds that are grown on the farm. The average farm flock of Idaho is fed wheat and wheat alone, with no variety whatever in the ration. Idaho can produce profusely all of the necessary feeds for a well balanced and economical poultry ration. Kaffir corn is the only grain used in the experiment that cannot be grown extensively and it is said that it is a good crop in many sections of the state.

Complicated tables, computed from feed formulas figured by their nutritive ratio, are not used in this experiment in reporting results. These tables are very nice and interesting but we find that the farmer is not particular about analyzed formulas; what he wants to know is just what feeds to feed and in what proportion to feed them to secure best results.

Three pens of 30 fowls each, were used under like conditions and fed different rations, wheat being the basic ration. These fowls are White Leghorn pullets, all of the same breeding, being all produced from the same breeding pen.

Pen One was fed as nearly in conformity with average farm practice as is possible in experimental work. They were fed no mash but were provided with grit and green food on the same basis as the other pens.

The rations are as follows:

#### Pen I.

##### Grain.

- 15 parts wheat.
- 2 parts oats.
- 2 parts barley

#### Pen II.

##### Grain.

- 12 parts wheat.
- 2 parts peas.
- 3 parts oats.
- 2 parts barley.
- 1 part kaffir corn.
- 1 part millet.
- ½ part sunflower seed.
- 1 part buckwheat.

##### Mash.

- 1 part wheat meal
- 2 parts bran.
- 2 parts white shorts.
- 1 part cornmeal.
- 2 parts fish meal.
- 1 per cent charcoal (check)

#### Pen III.

Pen No. Three was fed on the same ration as Pen No. Two only that the peas in the ration for Pen No. Two was substituted with corn for Pen No. Three.

All of the material for the mash was ground very fine and fed in open hoppers. The grain was fed in deep litter, about eight quarts per day per one hundred fowls, making about one-third mash (by weight) to 2-3 grain; Pen No. One getting no mash.

Pens Two and Three were fed all

of the green food, bone, oyster shell and grit they would consume; Pen No. One getting only green feed and grit.

The experiment started November 1st, 1914, and closes October 31st, 1915. The work is not as yet complete, but the results obtained to the 1st of October, with but one more month to run, are certainly conclusive so far as this year's work goes.

Following are the results in egg production:

Eggs	Under 2 oz.	Over 2 oz.	Total	Average
Pen I	492	245	1	738
Pen II	187	3101	122	3410
Pen III	263	3466	127	3856

It can be seen from the table that Pen No. I produced a very small number of eggs and that they averaged a high percentage of small eggs. Hens under farm conditions with the ration of Pen No. I would do much better, but where taken into account that these fowls were all confined to small lots (50ft.x50ft.) it can be seen that there was no possible chance for them to secure any other foods aside from what they received by the regular method of feeding.

On the farm, fowls run at large and are able to pick up much in the way of animal and mineral food, such as bugs and worms, gravel and charcoal.

These results would indicate that animal food in some form is absolutely necessary.

In the early months of the experiment, it seemed that Pen No. II would easily excel in egg production, but when they came to high production, they were unable to maintain body weight and when they began to drop off in weight, egg production dropped off. Egg production in Pen No. II would go down very low, then the fowls would come up in weight and egg production increase. Pen No. III maintained a more uniform weight and laid more eggs.

These hens were weighed on the last day of each month throughout the year and these observations certainly indicate that hens require flesh to produce eggs. Each hen was weighed separately and her individual record kept, both egg production and the weight of the hen.

These egg records are not large in any instance, which may be accounted for from the fact that the pullets used in the experiment were very young and immature at the time they were placed on test, some pullets weighing less than two pounds. They were very uniformly divided, however, the three pens weighing within 3½ pounds of each other.

The origin and former breeding of this strain is unknown, so far as any records at the university is concerned. They are, however, good quality fowls, many of them being splendid exhibition specimens.—Pren Moore, Idaho Experiment Station.

#### DON'T FEED YOUR

#### COCKERELS ALL WINTER.

Your cockerels are always fat in the fall. Why feed them all winter when you can conserve them at no extra expense in cans or bottles.

(Continued on page 15)

Following low round trip rates apply from Salt Lake City:

### Home Visitors'

### Excursions

### EAST

Via



November  
20 and 23.

December  
18 and 22.

Limit 90 days  
from date of  
sale.

Denver	\$22.50
Colorado Springs	\$22.50
Omaha	\$40.00
Kansas City	\$40.00
St. Louis	\$51.20
Memphis	\$59.85
Chicago	\$59.75
Minneapolis or St. Paul	\$53.85

Proportionately low rates from other O. S. L. points to many other eastern points.

EXCURSIONS DAILY to Pacific Coast points until November 30th. inclusive.

October and November are ideal months in which to visit the Pacific Coast. When you go, go one way via Portland and see the "Beautiful Columbia River Country."

City Ticket Office  
HOTEL UTAH

## GOING!

To The Expositions

### San Francisco Closes Dec. 4th

Tickets on sale  
Daily to Nov. 30th.  
Limit December 31st.

Everybody  
Should see  
The Expositions.

### Go See What the World Is Doing

For Information, Rates, Train Schedules,

See Local Agent



Or Write

J. H. MANDERFIELD  
A. G. P. A. Salt Lake City.

Tickets are good going or returning  
VIA LOS ANGELES



# THE FARMERS' MARKET PLACE

**For the Buyer**

This market place offers our subscribers and readers a very good place to advertise. If you have something to sell or want to buy here is the place to tell it. These advertisements are read because they offer bargains, your bargain should be here. Take advantage of this opportunity today.

**For the Seller**

## THE GEM HERD.

### Improved Chester White Swine

The Home of the Western Prize Herd. My winnings at Idaho State Fair 1913, were 13 first, 3 seconds, champion boar and sow, and champion fat barrow. At a Tri-County fair held at Jerome, Ida., I took all but one second. I have anything wanted in Chesters from a weaning pig to a champion boar or sow at prices all can afford. High class stock. Write me.

For Reference—all old customers.

**GEO. H. LAWSHE.**
**Falls City, Idaho**

### FOR SALE

Foundation Stock in Holstein Fresian's and Duroc Jerseys. Will exchange a few for hay or grain. For breeding and particulars write

**JOHN W. STUBBS**

R. D. No. 2. Provo, Utah.

### FOR SALE

One holstein bull calf two months old, sire is a grandson of the "King Of The Pontiacs." Price \$50.

**G. A. DIXON**

Garland Utah

## Percheron Stallion

An unusual opportunity to purchase a good stallion. Foaled June 1913. Utah bred. Sire imported Damocles. Very large and finely developed. Direct all inquiries to B. T., Utah Farmer, Lehi, Utah.

### FOR SALE.

Small herd Registered Jersey Cattle at bargain prices.

**E. L. MORRIS**
**156 12th Street**

Ogden Utah

### FOR SALE

The best hog and dairy farm in Utah containing eighty acres. Also a few very choice duroc boars ready for service.

**WILLIAM MERRILL**

Richmond Utah

## BUTTER WRAPPERS

We carry a large stock of the Best Vegetable Parchment Butter Wrappers and Especially Prepared Ink for Printing the same. We furnish them Postage Prepaid at the following Prices, money to accompany order.

100	.....	\$ .90
200	.....	\$1.25
500	.....	\$2.00
1000	.....	\$2.75

Send all orders to

**THE UTAH FARMER  
LEHI, UTAH**

## THE ALLIANCE INVESTMENT CO. SALT LAKE CITY, UTAH

No 11 Main Street.

We buy sell and exchange farms, ranches and city property.

We buy and sell mortgages and bonds.

We write Fire, Automobile and Plate Glass, Insurance.

We will mail you a list of our exchanges free on request.

**THE ALLIANCE INVESTMENT CO.**  
Was. 4443 11 Main St.

**SALT LAKE CITY, UTAH**

### IF YOU WANT

**A BARGAIN**

**"SEE ME"**

160 acres near R. R. in Idaho, house, fencing, water right, part under cultivation, big snap at \$2,250.00, half cash.

160 acres South Jordan, \$20.00 per acre; terms; would take city property for equity.

100 acres Sevier Valley house, stable, sheds, first-class water right, part in alfalfa, fine for beets, grain and hay; big snap at \$4500.00—\$1500 cash, balance easy.

290-acre improved ranch, 4 miles from Richfield, independent water right, good for beets, hay, grain and stock. Horses, cattle, hogs, all machinery and most of crop go with place. Cheap at \$75.00 per acre; terms.

320-acre, extra well improved ranch in Sevier Valley, lot of registered Durham cattle, horses hogs and all wagons and implements go with place; \$33,000; terms, or take good city property.

**IF YOU HAVE A BARGAIN**

**"SEE ME"**

**GEO. W. DANLEY**

**SALT LAKE CITY**

707 Walker Bank Bldg. - Wasatch 2989.

## Money to Loan

On improved farms with primary water rights, at reasonable rates."

### INTER-MOUNTAIN LIFE

**INSURAN CO.**

**11th Floor Boston, Bldg.**

**Salt Lake City, Utah.**

## FRUIT AND GARDEN FARM.

8 acres—part of the old Central Experimental Farm. Only ¼ mile from Lehi, Sego Lily School and Lehi 4th ward meeting house. A farm on edge of Lehi City Limits. 360 apple trees. Prunes, currants, and gooseberry trees.

**CASH OR TERMS.**

**A. F. GAISFORD**

**Lehi**

**Utah**

## RICHARDS' DUROC JERSEYS

WON AT UTAH STATE FAIR, 1915—Grand Champion Boar, Grand Champion Sow, Senior Champion Boar, Senior Champion Sow Eight First Prizes, Five Second Prizes, and Five Third Prizes.

RICHARDS DEFENDER, Grand Champion Boar was pronounced by many cavable judges to be the best Duroc Boar ever brought west. He is 17 months old weighs over 500 pounds. The big type with quality. That's why he has so many admirers.

We purchased Junior Champion Sow and first and second prize under six months sows, so that we now have in our herd practically every first prize winner at the 1915 show.

We can make immediate deliveries of young stock, either sex, from this champion herd at reasonable prices.

Express rates on stock purchased from us is a small item as our ranch is only 135 miles north of Salt Lake City.

## RICHARDS' LIVE STOCK COMPANY

VIRGINIA

JESSE S. RICHARDS, Manager:

IDAHO

### BARGAINS.

One 16-Horse Steam Tractor.

One 20-Horse Gasoline Tractor.

Have been used for short time, but are in first-class condition.

Write for price and details.

**S. PETERSON & CO.,**

**210 So. 6 West, Salt Lake City**

## We Have For Rent

well improved irrigated farm of 74 acres, near sugar factory in Utah. About half in alfalfa balance to be put in beets. Good buildings. Don't answer unless you are well equipped to handle a place of this kind.

### MILLER & VIELE

**FARM LOANS**

**803-7 Kearns Bldg.**

**Salt Lake City**

Wanted to hear from owner of good farm for sale. Send cash price and description. D. F. Bush, Minneapolis, Minn.

## DON'T FEED YOUR COCKERELS ALL WINTER. (Continued from page 14)

Professor Hogenson recommends the following recipes.

### For Stew

Prepare your chicken as you would for frying, season to taste, put it in bottles and put the rubbers and lids on loosely, place them in a boiler and boil for 4½ hours then take them out, tighten your lids and put them away until you wish to use them. The boiler must have a false bottom of wire netting, or a board with holes in it, or a heavy cloth doubled several times. Fill the boiler with water until the necks of the bottles are reached, and see that the boiler is covered with a tight, close fitting lid.

### For Frying.

Prepare your chicken and season to taste. Fry quickly to a nice brown before placing in the bottles, then proceed as above.

It is just as good one year after as the day you put it up. This recipe applies to the conserving of all other kinds of meats. Cans may be used instead of bottles but it often happens that enough bottled fruit has been eaten which leaves sufficient empty bottles for your meat.

## Stockmen Farmers Buyer or Seller

Has it occurred to the number of people that can be reached thru these columns?

The field we cover. Utah and Southern Idaho, all of the territory within 300 miles of Salt Lake City. Has there ever been a better time than the present to secure business in this rich territory served by the Utah Farmer. If you have stock to sell we can help you. If you want to exchange or sell a farm here on this page is the place to tell about it. The Utah Farmer goes into more homes outside of Salt Lake City and Ogden than any other paper.



## SEWING LESSON X.

(Continued from page 5)

just the width of the thread. If the dot is as large as shown in illustration No. 42, run a thread around the outline and then slash the material in the circle with a small pair of embroidery scissors, lengthwise and crosswise. The slashed portions are then turned under until only the thread outline is visible. The stitches are now taken as described for the smaller eyelets and as shown in the illustration.

An oval is treated in exactly the same way as a large circle. The material within the outline is slashed lengthwise and crosswise.

**French Stemming**—Is a handsomer form of outlining. On very dainty work the plain outline is never used for stems. To work French stemming, run a thread along the outline. Now work tiny stitches over the thread, barely taking up the material. The fineness of this stitch depends largely on the number cotton you use. No. 25 makes a medium fine stem.

**Seeding**—Often when a leaf is broad and split, satin-stitch would make it too heavy-looking. So one side of it is worked in plain satin-stitch, and the other half outlined and filled in with seeding stitches, which are nothing more than tiny backstitches taken in rows (No. 45.)

**Cross-Stitch**—Is used on aprons, neckwear and waists. It can be worked on canvas, counting the threads of the canvas to keep the stitches even. (No. 46.) Transfer designs for this work can be bought which need only to be stamped on the material. Thread slightly heavier than the outline should be used with these cross-stitch patterns.

When canvas is used, after the stitches have been worked draw the threads of the canvass out one by one until the stitches are left directly on the material. It is quicker to work all the stitches going in the same direction first, then to come back and cross them all at the same time.

**Lazy-Daisy Stitch**—Is the name given to a little open loop stitch in the form of a daisy. It is very pretty when used between tucks, and makes a good decoration for underwear. Use marking cotton No. 16 for these daisies. Start from a common center and take a stitch one-quarter of an inch long, as you would for chain-stitching. The needle is then drawn through. Continue holding the thread down with the left thumb and pass the needle through the material on the outer side of the thread loop. The needle is now inserted at the place from which it originally came out, and a second stitch is made directly opposite the first one. Six or eight petals complete the daisy. If a smaller daisy is wanted, make the petals less than one-quarter of an inch long. In this case, fewer petals will be required. The daisies can be made as large or as small as desired.

**French Knot**—Is a good stitch for decorating the edges of collars. They may be used in a close cluster to represent the centers of flowers. No pattern is required for this stitch. French knots are the exception to the rule of no knots in embroidery. A tiny knot should be made in the end of your marking cotton. Then bring the cotton up from the back of the material. Hold the thread down

to the material with the left thumb. Wind the thread around the needle three times, easing the thread under the thumb while the thread is being twisted. Now twist the needle, holding the thread taut with the thumb and insert the needle into almost the same hole that the thread comes out. Bring the needle up at the next point where a French knot is desired.

Embroidery hoops may be used to hold the work, but all the stitches given in this chapter can readily be done without them.

#### PEOPLE OF CARBON AND EMERY COUNTIES WORK FOR ROUND-UP.

The way in which both Carbon and Emery Counties have been working to make their Round-up this month a success is worthy of imitation in every other county in the State. Every business man, every county official, every church officer and every school teacher has been exerting his influence to the utmost. All these forces are working together as one man for the agricultural progress of the two counties.

#### HOW TO MAKE VINEGAR.

The housewife, either on the farm or in the city, who makes her own vinegar may be assured of both its purity and strength if she follows certain specific directions, according to Miss Carrie Pancoast of the Missouri College of Agriculture.

Good vinegar can be prepared from cider. Fill a barrel or cask half or two-thirds full. A considerable surface of the liquid must be exposed to the air. For this purpose, bore two-inch holes in opposite sides of the barrel. Cover the holes with wire liquid, and one near the top of the barrel. Cover the holes with wire netting to prevent the entrance of flies.

One of three methods may be pursued in the formation of vinegar from the cider—(1) Allow the cider to stand until souring occurs; (2) add a little vinegar of good quality, or (3) hasten the process by the addition of the "mother of vinegar," a portion of the film which has developed on the surface of vinegar previously prepared.

Part of the vinegar may be drawn off and the loss made good with fresh cider, using care not to break the film. The added cider will rapidly be converted into vinegar, and the process may be repeated in three or four weeks.

When drawn off, the vinegar should be strained, and placed in tightly stoppered vessels—otherwise it will lose its strength.

#### LATE IRRIGATION.

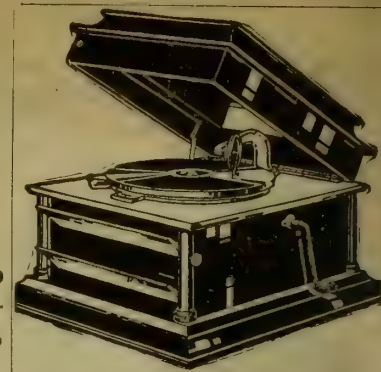
Use excess water late in the season in irrigating naturally dry lands and all areas where rainfall is light. It pays to irrigate such areas until freezing weather comes. Above all give the alfalfa an irrigation after the growing season is over. One such in the fall is worth two in the spring. Water dissolves plant food from the soil while land that remains dry has no increase in plant food.

This is recommended by Prof. L. M. Winsor, irrigation specialist for the Agricultural College of Utah, also by Prof. Homer as being especially valuable for young orchards.

Let's make the best of what's left of nineteen-fifteen.

"Utah's Most Popular Music House"

## This is the famous "FAVORITE" Model COLUMBAI GRAFONOLA



It has been sold for 4 years to more people than any other instrument, regardless of name, price or make.

"FAVORITE" in name and "FAVORITE" in fact, and now better worthy of its name and of its reputation than ever before.

You will be proud indeed to have a "FAVORITE" Grafonola in your home and prouder still to show it to your friends and relatives. You will never lack entertainment and amusement of the RIGHT kind if you have a "FAVORITE" Grafonola in your home. It brings you "all the music of all the world"—any music at any time.

#### THE PRICE IS \$50—\$10 CASH AND \$5 A MONTH

Price need no longer stand in the way, or terms either, for here we offer you a most convenient plan of securing the instrument on a small cash first payment and balance monthly WITHOUT INTEREST.

It's just as safe and satisfactory to order BY MAIL as if you came to our store and bought

Among our most satisfied patrons are those who have PURCHASED BY MAIL. You are dealing with "Utah's Pioneer Music House." "Satisfaction or your money back."

12 Double-disc Records (Music on both sides) Cost Only \$7.80  
Instrument and Records shipped  
PREPAID to your R. R. Sta.

Tell us what KIND of music you like and we will select 12 of the best records that are bound to please you. Columbia Records are "double-disc—double value—double everything but price."



Daynes-Beebe Music Co.  
Salt Lake City, Utah. U. F.  
Please send me FREE and  
POST PAID Catalog of  
Grafonolas and Records.

Name .....

Address .....

**Daynes-Beebe Music Co.**  
45 MAIN ST. SALT LAKE CITY, UTAH.  
ESTABLISHED 1860  
"OLDER THAN THE STATE OF UTAH"

## Are You Saving Royal Labels For Xmas Presents?

It will pay you to save the labels and wrappers from Royal Breads and take advantage of the extremely low wholesale prices on useful household necessities, which the Royal Baking Company have secured in carload lots for users of

**ROYAL  
TABLE QUEEN**  
"The Perfect Bread"

Ask your grocer about the premium plan which saves you the cost of Royal bread. The difference between Royal prices on these high class articles and the regular retail prices will buy enough of these nutritious golden brown loaves for your entire family.



**An Honest Bread at An Honest Price 100% Pure**

**Royal Baking Co., Salt Lake City, Utah**



# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region

OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE

VOLUME XII; No. 17

LEHI AND SALT LAKE CITY, UTAH

NOVEMBER 27, 1915



## Some of the Good Things In This Issue

SLAUGHTERING HOGS ON THE FARM	DR. W. E. CARROLL
THE GROWING OF SWEET CLOVER	L. N. HINCKLEY
RECLAIMING THE DESERT	J. W. JARNAGIN
FARM DITCHES	L. M. WINSOR
THE MAN, AS A FACTOR IN CLEAN MILK PRODUCTION	BEN R. ELDREDGE
MEANS OF CONTROLLING WATER CONTENTS OF THE SOIL	PROF. J. C. HOGENSON
AND OTHER TIMELY ARTICLES.	



# While You Tilt Your Chair Against The Wall

If Luther Burbank hadn't plugged along like a dappledgrey plow horse—if Tom Edison hadn't stretched his working day to over twenty hours, you, the other "feller," and all the rest of us, would have been some years behind our present stand.

THESE MEN HAVE KNOCKED AT LEAST ONE BIG WORD INTO OUR LIVES—I-N-T-E-N-S-I-V-E-N-E-S-S. Europeans have laughed at us Americans vigorously, and have claimed that the Western farmer especially **never could learn to work intensively**. "You need all out-of-doors to raise a sack of grain," said they, "and talk about your irrigation, why you flood your land, you don't irrigate it!" Although we didn't do much FLOODING last summer, we must admit that intensive farming in the Great New West is just finding itself.

Of course, in Europe the land has been used for centuries and centuries. Over there farmers' wealth is invariably reckoned in the size of his manure pile, for without ample fertilizer he may just as well resign his farming job and take up school teaching or some of the easy professions.

But between bites, both you and I must admit that the European farmer knows the intensive farming game. He frequently supports a family of six with the income from three to five scrawny acres, but in so doing he makes those acres look like the Garden of Eden.

Now, how do these French, Belgian and German friends of ours do this?

Here's how—they read first; then they make Mother Earth prove that this reading pays.

Right here in the West, men of farm affairs are using the Utah Farmer in the same identical way, and they are proving that it does pay, and big, too, at that. Right now is just the time for you to give it a try! Are you game?



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No. 17

## Slaughtering Hogs On The Farm

Dr. W. E. Carroll, A. C. U.

As colder fall weather sets in, most farmers and many families in the smaller towns have one or more hogs to kill. Very few people so situated are equipped with the necessary machinery for artificial refrigeration. They must, therefore wait for this coming of natural cold to provide conditions favorable for curing and keeping fresh meat. Besides this, Thanksgiving and Christmas festivities are much more complete with the many products of "pig killing day" available, so that from many angles November and December are the two months most favored for the home slaughter of hogs.

### Pig Killing Made Easy.

Pig killing day to the boy usually means a round of fun, beginning with the squeal of the pig and ending with the blowing up of its bladder. To the men involved it results in a lot of hard and more or less disagreeable work because of lack of conveniences make it otherwise.

Where this is a regular yearly piece of work, it usually pays to make some permanent preparations. Such equipment need not be elaborate nor expensive to be extremely serviceable.

As a usual thing, facilities for heating water and scraping and hanging the hog are more or less inconvenient. Attention to such details will be found to be well repaid in the time saved and in the greater ease with which the work is accomplished.

**Heating Water.**—Water can be heated in large kettles suspended by a hook from a bar. The fire can be built directly under the kettle, thus insuring most rapid heating and economical use of fuel. In this case the water is transferred, when hot, to the scalding barrel.

Another device which can be used both for heating water and scalding the hog, is a vat built over a mason work fire box with a short flue or chimney. The sides of the vat are 2 x 12's or 2 x 14's, cut rounding on each end. Upon this rounded side the sheet iron bottom is nailed. The fire box is built so that the metal bottom is the only part which comes in contact with the fire. This, of course, protects the wooden sides.

When using the vat for scalding, the fire should be almost out or a removable slat platform put under the hog, otherwise the parts of the hog which come in direct contact with the hot metal bottom may be cooked.

**Scraping Platform.**—The platform upon which the hog is to be placed for scraping should be high enough that the work can be done with comfort, and arranged so the extra water

can run through it or off the end. A frame of half dozen 1 x 3's stood on edge 1 or 1½ inches apart, at the side of the platform for the workers to stand on insures dry feet. The barrel (when used) should be leaned against one end of the platform. With the permanent vat described the platform is adjacent to one end of the vat.

**Gallows.**—A block and tackle is an almost necessary part of the equipment. This can be used with three poles set up in Indian tepee fashion and tied together at the top. A more permanent method is to set two poles

below the eyes and directed some what downward is sure and safe.

Immediately after stunning the hog is stuck. This is best accomplished by using about an 8 inch knife with a rather narrow blade. The knife is inserted in the hogs throat just in front of the breast bone. The point is directed to the tail and the knife kept in line with the back bone to avoid sticking a shoulder." When the knife is inserted full length give it a quick turn about one half way around and withdraw it. Toward the surface the hole should be from 3 to 4 inches long to insure free bleeding.



in the ground with a cross pole on top and attach the pulleys to this. The gallows should be placed handy to the scraping platform to save unnecessary lifting of the hog.

### Method of Killing Hogs.

**Preparation.**—Many practical difficulties in dressing a hog will be overcome if the animal is fasted for 12 to 18 hours before being killed. A light feed may be given in the evening when the hog is to be killed the next forenoon. This fast reduces the contents of the intestines so that they can be handled much easier and with less danger of breaking.

**Killing.**—The unnecessary squeal, which is usually so disagreeable to the women folks can be done away with if the pig is stunned or shot before sticking. A sharp blow in the forehead from a small sledge hammer or even the back of an axe will usually render the animal unconscious, so that the sticking is done without pain and therefore the harrowing noise of the squeal. Owing to the possibility of the animal dodging the blow this method is no so sure as shooting with a small gun. A bullet from a 22 caliber rifle just between and slightly

below the eyes and directed some what downward is sure and safe.

**Scalding and Scraping.**—As soon as the hog is thoroughly dead and the blood well drained from the body, it is then scalded to facilitate the removal of the bristles. Water for scalding should be at 180 degrees F. A temperature much lower than this will not loosen the bristles, while if the water is much hotter it cooks the outside of the carcass and sets the bristles.

A barrel is usually not long enough to scald the entire hog at once. After one end is well scalded so the bristles pull easily, the scalding is completed by turning the hog end for end. All the time the hog is in the water it should be kept in motion to insure even scalding.

When scalding is complete as shown by the ease with which the bristles loosen on all parts of the body, the hoofs are slipped from the toes and the hog is placed on the scraping platform.

Scraping may be done with a variety of instruments, butcher knives, hoes or even sharp cornered sticks.

Probably the best thing is a regular hog scraper, a cup-shaped metal disc with a handle on, and at right angles to, the convex side. Even with this a butcher knife will be found handy to clean the corners about the head and feet. Scraping should begin with the head and feet, as these parts cool most readily and are most difficult to clean when cold. By grasping the foot firmly and twisting the hand around it tightly a large part of the bristles are removed by this one movement.

After the scraping is finished the gambrel cords are raised the gambrel is inserted, and the hog hoisted by means of the block and tackle. The carcass is then washed down with cold water, using the knife to scrape down any dirt that may have collected on the surface.

The head is frequently severed from the body before anything further is done.

**Gutting.**—To remove the entrails, first split the hog between the hind legs. The bones can easily be separated with a knife if the cut is made directly through the joint. The knife is then run down the middle of the belly. This first cut is usually not made entirely into the abdominal cavity. The second cut usually opens the cavity its full length. This is made slower than the first and the point of the knife is shielded by the the fingers of the left hand, to prevent cutting the intestines. Split the breast bone with an axe or saw and cut down through the sticking place to the chin, if the head has not previously been removed.

Cut around the rectum, tie, and pull it down to the kidneys. Neither the kidneys nor the kidney fat should be disturbed. The stomach and intestines are removed together into a clean tub held for the purpose. The esophagus where it enters the stomach is tied off and cut to free the intestines from the carcass. The diaphragm is cut around the body and removed with the heart, lungs, gullet and tongue (if the head has not yet been removed.) Wash the hog down inside with cold water and sponge off with a dry cloth.

Put a "spreader" across the abdominal cavity and another spreading the chest.

The fat should at once be removed from the intestines before it cools. This is best done with the fingers. As lard made from this fat usually has a strong flavor. It is frequently rendered separate from the other fats.

If the liver is desired the gall bladder should be carefully removed,

(Continued on page 7)



## DAIRYING

### THE MAN AS A FACTOR IN CLEAN MILK PRODUCTION.

Ben R. Eldredge.

There is one factor in clean milk production that the milk inspector seldom, if ever, takes into consideration. The score card allows for the health of the cattle. They should be clean, well-fed and sheltered in sanitary stables properly lighted and ventilated. Utensils and their care all receive minute attention. Methods are analyzed and scrutinized, and it is right that they should be. But after all the prime factor in the production of sanitary milk is the man who does the work and the ordinary score card ignores his existence. If his health is below par, if his habits are not in harmony with the quality of product aimed to be procured, if his clothing is of a never-laundered variety and if he is one of those spitting animals that often infest the dairy, then no equipment or method that can be installed or inaugurated will result in a high-class product.

I have noticed when I have been weighing milk in yards and stables where I have been doing official testing or assisting in record keeping and where several milkers were working that some of these who bring their milk to the scales, showing no accumulation of any foreign nature on the top of the milk, while others will bring a pail of milk dusted over with fine dark scale that could only come from the hand of the milker as it is brought in contact with the udder of the cow.

These accumulations would show with each cow milked by that individual so that it was not a question of more or less dirt on the udder of the cow but was a characteristic of that person's manner or method of milking. The conclusion would be this: That a comparison of the milk drawn by these different individuals would show some much cleaner than others and a complete investigation will reveal that under similar conditions one milker will produce a clean, high-class article produced by another milker will be characteristically lower in quality.

I had an opportunity to make observations in a stable where a number of milkers were working and each had

a string of cows that occupied all his time. In other words, these men did milking with its attendant work but no other farm labor. Each man was furnished a white suit at milking time but was supposed to care for this suit in such a way that three suits each week might be used and maintained in a fairly presentable condition. There was one young fellow who was a natty person in his dress under all conditions. He may be known as Frank. He could use his suit three days doing just as much work under exactly the same condition as a companion worker named George, but George's clothing at the end of the first day's use would be more soiled than Frank's at the end of the third day.

Bacteriological investigation of the clothing of different individuals would reveal wonders

In producing milk for the retail market in my home town where we frequently had the milk examined and tested by the Health Department my average bacteria count ran along about 22,000 B. per c. c. Two young men were doing the milking who had been working together for over a year under the best training I could give them, when circumstances developed that made a change necessary. One of them took other employment and was replaced by a new milker. Beginning with that change there was an increase in our bacterial count reported in the Health Department. Every other condition about the dairy was as near as we could possibly have it the same as before. A scrutiny of the new milker's personal habits revealed what I accepted as an explanation of the trouble. Compared to the man he succeeded the new man was a careless dresser and woefully indifferent as to matters of personal cleanliness; yet he was even then considerably above the average man seeking employment in dairy barn work. Illustrating this point is the experiment cited by Stocking where the average of nineteen tests was taken, in which two milkers who had received no training in dairy sanitation and one milker who was a graduate of the Connecticut Agricultural College, were used. The average bacterial count per cubic centimeter in the milk drawn by the untrained men was 17,105; while that of the trained man was 245b.

At one of our great dairy shows held some years ago the highest scoring sample of milk was from a farm in Ohio. Investigation showed that there was no expensive equipment, no elaborate method but that a clean man produced that milk under what he called "common sense cleanliness." There was milk in that contest that came from plants where thousands of dollars were invested in high-class equipment where Doctors of Medicine and Veterinary Surgeons outlined methods but the old man with his common sense cleanliness produced the milk carrying the lowest bacteria count in the entire exhibit gathered from a great many states and from a radius of fifteen hundred miles.

Now, it has been said: "That unless a man is naturally tidy there are no rules or regulations that could make him so." That may appear as a self-

## Nov. 29<sup>th</sup> to Dec. 4<sup>th</sup> Electrical Prosperity Week

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Electricity does our sewing, cooking, washing and ironing. It cleans the home, and keeps it free from dirt and germs. It supplies warmth in winter, and cool comfort in summer.

It links together the people of the world by the wireless cable, the telegraph and the

telephone, making one huge family of us all.

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If you will, what would happen if electricity were suddenly eliminated.

The wheels of commerce would be halted. We would be in darkness.

Without telegraph, cable or wireless, we would be cut off from the outside world. Without the telephone, we would again be deaf and dumb to all absent ones. Progress and Prosperity would suddenly be checked.

#### In Acknowledgement

Of the service electricity is rendering, the electrical industry, and other great industries co-operating with it, decided to dedicate the week of November 29 to December 4 to a national celebration, to be known as Electrical Prosperity Week.

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## Have You Spare Time?

We have a proposition that should interest any one who has a little spare time or some one who wants to devote their entire time to it. It is work in connection with the Utah Farmer and another magazine. If you are interested write us today as we will only give it to one person in a town. You can make some money this winter if you will push the proposition we will make you.

UTAH FARMER

Lehi, Utah.





## Water-Proof Your Family's Shoes for Winter

By The Oil Philosopher.

The cost is so small, the trouble little, the results so satisfactory, that you should not delay getting a can of Duck-Back Shoe Oil and water-proof your family's shoes.

Apply it to the soles and uppers of new shoes and old shoes, each week. The feet will then be kept warm and dry.

## Duck-Back Shoe Oil

Preserves the leather in shoes, and strengthens their wearing qualities. It is just the thing for heavy school shoes; it makes them durable and easy on the children's feet.

Be sure you ask for "Duck-back"—it's the natural oil for shoes.

If your dealer is out of stock, write the Utah Oil Refining Company, Salt Lake City, and it will be that you are supplied

### FOR SALE

One Registered Jersey cow, 6 years old, just freshened, 35 lbs. milk per day. Best 5.4. Fine big well balanced udder. Holds out well to the end of lactation period.

Reason for selling is that have no stable room.

R. WALTER T. HASLER  
Provo, Utah.

evident fact but cleanliness is a question of education and that is true about personal cleanliness as well as about cleanliness in other matters and I believe it is past the time when the inspection of dairies should include more attention to the personal cleanliness of the men who do the work. One reason why this has not received more attention in the past is that our inspectors themselves have been deficient on the score of personal cleanliness. I wonder if it would shock some of you if I were to make the statement that I knew of stables that were cleaner before inspection than immediately after. Perhaps that is a hard statement but I have had to reprimand around my stable men who were in the uniform of the Health Department for indulging in practices there that my employees would never think of committing. A dirty man in the finest stable that can be built is a source of contamination to the milk. No equipment, no method, will overcome that impediment. When we get to paying more attention to this matter of the clean man in the production of all food products we will then have taken one of the most important steps on the road to the production of clean food.

### SILAGE CROPS TESTS AT IDAHO STATION.

E. J. Iddings.

Early this year tests with crops other than corn for the silo were started at the Idaho Experiment Station. In addition to approximately 25 acres of corn, 5.9 acres were sown to peas and oats and 5.8 acres to vetch and wheat.

The peas and oats were seeded April 15 at the rate of 60 pounds of Blue Prussian peas and 40 pounds of Swedish Select oats per acre. Harvesting of this crop was started July 23, 99 days after seeding and with the exception of a portion badly lodged it was cut with a binder. Where the crop is not excessively heavy and tangled it should be cut with the binder set low. Sheaves are much easier loaded and feed into the cutter much faster than loose material. When bound into sheaves the crop is handled more rapidly and less help is required. The peas were ripening fast when cut and the oats were in the milk. More time would have been given the oats except that the peas were beginning to lose foliage. The yield of green foliage from the crop was 7.4 tons per acre.

The vetch and wheat was seeded April 16 at the rate of 40 pounds of Sonora Club wheat and 40 pounds of vetch per acre. On one half of the acreage winter or sand vetch was used and on the other half spring vetch was seeded. The wheat grew rank, shading and checking the growth of the vetch. Little difference was noted between the relative growths of the two kinds of vetch. This crop was cut July 24, 99 days after seeding, with the wheat in the hard dough stage, and yielding 7.2 tons per acre. The binder did better work here than with the peas and oats.

A silo 10x26 had been constructed for holding each crop. In filling a small stream of water was thrown into the blower by means of a hose. This assisted in excluding air and resulted a firmer pack.

These crops yielded reasonably

well, having been grown on Palouse soil cropped for several years in succession. Corn on sod land on the University Farm this year yielded 7.5 tons per acre of green forage.

The peas and oats silo was opened August 21 with but 4 inches of waste. Considerable heat was still present but the silage was mildly acid and was greedily eaten by cows and young cattle.

During the winter three strings will be made of the dairy herd and three strings of the beef herd. To a string in each herd peas and oats silage will be fed. Vetch and wheat will be fed a second string in each herd and a third string will be fed corn silage. In this way it is hoped to secure valuable facts concerning the feeding value of these new silage crops comparing them with corn.

These tests of crops other than corn for the silo will be extended over several years. Red Russian wheat will be seeded at once for one of next years crops.

### LAMB FEEDING EXPERIMENT.

During the winter of 1914-1915 the Nebraska Experiment Station conducted some experiments on feeding lambs. This station has just issued a bulletin telling the results of their work.

A portion of the bulletin concerns the feeding of western lambs. Two hundred and fifty head of these were divided into five lots and fed on various rations composed entirely of three feeds—corn, alfalfa, and corn silage. The lambs were fed in the open throughout the 65-day period, commencing November 26, 1914.

The rations fed were as follows:

Lot I, ground corn, ground alfalfa hay, and corn silage.

Lot II, ground corn and ground alfalfa hay.

Lot III, shelled corn and good alfalfa hay.

Lot IV, shelled corn, good alfalfa hay, and corn silage.

Lot V, shelled corn and a poor grade of alfalfa hay.

The ration composed of shelled corn and alfalfa hay gave somewhat the best results, although shelled corn, alfalfa hay, and corn silage proved to be very profitable. The grinding of corn and alfalfa and feeding the two as a mixture was not profitable. The gains were scarcely as great as where the whole grain and whole hay were fed, and the cost of grinding made the feed considerably more expensive.

The feeding of a poor grade of alfalfa hay, namely, typical first cutting, off-colored hay, with shelled corn, in comparison with the feeding of a good, clean grade of leafy alfalfa with shelled corn, indicated that the former was not nearly as valuable as the latter in producing mutton. In fact, the good hay proved to be of twice the value of the poor hay.

The daily amount of feed consumed and the net profit of each lot was as follows:

Lot I, 1.49 pounds of ground corn 0.596 pound of ground alfalfa, and 0.726 pound of silage. Net profit, 88 cents.

Lot II, 1.57 pounds of ground corn and 0.845 pound ground alfalfa. Net profit, 80 cents.

Lot III, 1.444 pounds shelled corn and 0.94 pound ground alfalfa. Net profit, \$1.10.

Lot IV, 1.45 pounds shelled corn,

(Continued on page 13)

## Put Utah-Idaho Sugar On Your Grocery List

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## Field and Farm

### THE GROWING OF SWEET CLOVER. L. N. Hinckley.

Sweet Clover, for years past classed among the noxious weeds, is coming to its own. Until very recent years, there were indeed few persons who looked upon Sweet Clover as anything but a weed, and as such it has been vigorously fought along the fences and ditch banks, as well as in the fields wherever it made its appearance. It is only during the past few years that we have started experimenting with this plant and found that in reality it is not a weed, but a plant of great value in redeeming waste land; land which carries a large per cent of alkali, or that has become water logged. Nor, indeed, is this alone the only value of Sweet Clover. As a forage crop, we are learning that it is second only to Alfalfa. Reports from some agricultural and experiment stations ring with the praises of Sweet Clover as a forage crop, even going so far as to claim it a very good substitute for, if not the equal of, alfalfa.

For years past, we in this western country, have been studying on some plan whereby vast areas of waste land, usually alkali land, might be redeemed. In some instances success has been attained through drainage and then flooding, but not infrequently has this method resulted in failure. The problem is now solved by the growing of Sweet Clover on this heretofore waste land.

The writer, being in possession of much of this waste land, had long desired to find some plan whereby this land might be made to grow something more valuable than Salt Grass and various kinds of weeds. It was only after reading several articles in our farm journals, relative to the merits of Sweet Clover in such cases, that the determination was finally made to plant Sweet Clover on some of this land.

In order that the reader thoroughly appreciate every condition of my experience in the production of this crop, I shall start right at the beginning, or with the plowing of the ground.

After having thoroughly decided to try some Clover, I selected a piece of ground that to my certain knowledge had never produced a thing but Salt Grass. This ground was not very wet, but it carried a large per cent of alkali. The ground was plowed in the fall about 3 or 4 inches deep. After having stood through the winter, the ground was thoroughly harrowed with a heavy harrow, disced, and then re-plowed, this time plowing about 5 inches. By another harrowing the ground was ready to plant. After sowing barley over the ground, Sweet Clover seed was drilled, using 12 lbs. per acre. The clover seemed slow in starting and in some spots, after it came up, it seemed to curl up and appeared dead. Having a large artesian well close by, I decided to water this ground. After having watered, the clover looked much better. As a result of my experiment that summer, from a part of the ground I harvested a good crop of barley; the other part having killed out on account of the alkali; during the fall I harvested a very good crop of hay from this same

piece of ground, the clover having come quite uniformly over the entire plot. Of course there was considerable barley stubble in the hay, but it made good feed for dry stock. The stock liked it and did remarkably well on it.

The following spring; that is this last spring, I decided to plant more Sweet Clover on more of my waste land. This time I was not so painstaking in the preparation of a seed bed. I had some ground that had been broken up from Salt grass sod the year before. I went over this ground with a spring tooth harrow and then drilled in the seed. On portions of this ground I got a good stand of clover the portions where it failed to come were two wet, I believe, as this land is situated very near the shore of Utah lake.

Having heard that the clover would grow anywhere where it could get sufficient moisture, and yet not be too wet, I decided to experiment a little. I selected a small tract of ground adjacent to the piece first spoken of in this article, and also near the artesian well. This piece was a heavy salt grass sod, having never been broken up. On this sod I drilled the seed, irrigated the ground and got a good stand of clover.

This year, from 15 acres of this heretofore waste land I harvested 44 large loads of Sweet Clover hay. Perhaps I had better not say hay, as I allowed the clover to go to seed. From these 44 loads I threshed 174 bushels of clover seed. This is not as remarkable a yield as has been reported from various other sections but owing to the fact that it was my first experience, and also the first experience of the threshing crew and machine who did the threshing, I suffered considerable loss of seed. Notwithstanding that fact, I am pleased with the appearance of that waste land. I now have a large stack of chaff that I am thinking will do very nicely to winter range stock on, and a nice lot of seed stored away, to be sold whenever prices are right, and all this from what was waste ground.

### RECLAIMING THE DESERT.

By J. W. Jarnagin Editor of the Iowa Farmer a reprint from that paper.

People residing in the corn belt are disposed to look in pity upon the efforts being made in arid regions to grow crops, but out here in Utah the farmers are extending sympathy to the residents of other section of the country that are at the mercy of the elements. To harvest great wheat crops, get four cuttings of alfalfa in a single season or obtain a yield of clover seed that brings twice as much as the land is worth upon which it grew, and to do it all without a cloudy day or a drop of rain, is so different from the Iowa method as to make the corn belt farmer wonder how it would seem to be thus independent of weather conditions.

In my last article I told something of dry farming methods in semi-arid regions and it is wonderful what results are obtained under decidedly adverse conditions, but an irrigated country presents quite a different aspect. To be able to administer a good, soaking potion of moisture just as it is

needed affords a kind of independence that makes possible a selection of farm operation that appeals to the varied tastes of the husbandman. In my journey through the rich valleys in the mountain regions I have seen millions of bushels of wheat and other grain sacked and piled in great ricks with absolutely no fear of damage from rain and therefore without any covering.

Utah is never taken into account as a great agricultural state. We are inclined to look upon it as a desert and yet here is being developed one of the greatest farming sections of our country. When one sees the wonderful yields of alfalfa and the enormous grain crops he can readily understand the boast of the people of this section when they declare that Utah "is to be the dairy center of the world." Great attention is given to the breeding of the best strains of dairy cattle and from the splendid herds that I have witnessed I am also constrained to grow enthusiastic over the dairy possibilities of this state.

And then there is the sheep industry that must not be overlooked. Millions of sheep are grazing on what appears to a "tenderfoot" to be bleak and barren foothills but which in reality afford the animals a most nourishing portion. When winter comes the great ricks of alfalfa afford a fattening ration that puts the finishing touches upon the wool crop. It was a revelation to me to learn that the quality of the wool is governed by the physical condition of the sheep. A half-starved animal produces what is known commercially as "shoddy" but the sheep that are well fed and kept in prime condition furnish a quality of wool that commands the highest price. The people out here are not content to raise sheep and wool for the East but they are establishing woolen mills and are thus furnishing clothing for their own people. In Provo City are extensive mills and the people out here will be independent of the eastern woolen mills within a decade. What is true of woolen goods is likewise true of numerous other commodities. The great mountain regions are building up industries at a marvelous rate.

The most profitable industry just now is that of the growing of sugar beets. I was amazed to witness the extent of this development. Great beet sugar mills are numerous and the output is surprisingly large. At West Jordan, near Salt Lake City, a factory is to be erected at a cost of \$1,000,000. Farmers are enthusiastic over the growing of sugar beets. In order to insure the erection of a factory pledges must first be obtained that will guarantee the growing of a sufficient acreage of beets to make the sugar factory profitable. The requisite amount is easily obtained. I had no idea that the growing of sugar beets was such a large industry in this state and it seems to be in its infancy. Farmers get \$5 per ton and the yield runs from 12 to 22 tons to the acre. One farmer told us that he grew 25 tons to the acre on land that had been in alfalfa. The labor question figures in growing sugar beets. Some localities have hesitated about growing them because it brings into the community a large number of foreigners, mostly Russians, who do not readily conform to the American standard of living, but improved machinery for cultivat-

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ing the crop is destined to do away with the drudgery now imposed.

The beet sugar people are hoping that the duty on sugar will be restored when congress meets next month. I have been surprised to learn of the large part beet sugar plays in this country. When the only factory Iowa had closed down at Waverly because of the removal of the tariff it was generally supposed that the beet factories all over the country had done likewise, but in this western country the erection of sugar mills has been going on in spite of unwhole some legislation until now it is given out that the production of sugar from beets leads that produced from cane nearly a billion pounds, thus reversing the conditions that obtained a few years ago. In 1895, according to the statistical abstract of the United States, the domestic sugar product totaled approximately 775,000,000 pounds, the share of beet sugar being



only 45,000,000 pounds. In 1915 our sugar product had increased to 1,941,000,000 pounds, the share of beet having grown to 1,440,000,000 and that of cane having decreased to 493,000,000 pounds.

Beet sugar has now practically disappeared from our imports. Eighteen years ago, when the Cuban supply of cane sugar was cut off by war, we imported nearly 2,000,000,000 pounds of beet sugar. After the return of peace in Cuba our imports of beet sugar fell off sharply, amounting in the last fiscal year to less than 1,000,000 pounds. We still import a vast quantity of cane sugar, for while we produced 1,941,000,000 pounds of sugar at home, the consumption in the United States, exclusive of its sugar-producing islands, during the fiscal year ending June 30,

1915, has been calculated by department of commerce experts as 8,630,000,000 pounds, or eighty-six pounds per capita.

When anything is said of Utah the Mormon church naturally projects itself to the imagination, but out here it fills no larger place in human affairs than do religious denominations in Iowa. The Mormons and Gentiles are living in peace and contentment, just as the Methodists, Baptists and Catholics are doing in Iowa. The Mormon church has large properly interests and mixes business and religion together in a larger degree than other religious denominations, but for all that there is no prejudice apparent and people of all religious faiths mingle together in unity and fellowship just as in other parts of the country.

# Slaughtering Hogs On The Farm

(Continued from page 1)

care being taken that none of the ducts are cut and that the bladder itself is not broken.

The upper, loose portion of the heart should be cut off and the heart split and washed free from all clots of blood.

## Cutting the Carcass.

The method of cutting up a hog depends upon what is desired. One method results in a large amount of sausage, another in a large amount of fresh meat, and still another is employed where much lard and little bacon or the reverse is desired.

The carcass should be thoroughly cooled, but not frozen before the cutting is done. While still hanging it is split down the backbone with an axe or cleaver—better still, a saw, as this avoids the bits of bone which are splintered off by the other methods.

The cutting is most conveniently finished on a table. The leaf fat is first taken out by beginning at the front and peeling it back with the fingers. Next remove the shoulders with a cut straight across between about the fourth and fifth ribs. The ham is taken off with a rounding cut. The loin and ribs are removed from the side. Cutting as close to the ribs as possible improves the quality of bacon, but cuts down the amount of fresh lean meat available. The lean meat on the ribs can be trimmed off for sausage or the untrimmed ribs off be used for chops or roasts.

The hams and shoulders are trimmed neat and smooth and the legs cut off about 2 inches above the hock and knee joints. Take the ribs and neck bones out of the shoulders and trim them down to the top of the shoulder blade.

The sides are cut lengthwise into 3 about even, straight strips, or if to be cured and smoked, into two pieces, the upper one-third (the back strip) for salt pork or lard, and the lower two-thirds for bacon. The sides and ends of the pieces to be cured or salted should be trimmed straight.

## Curing Pork and Bacon.

There are two general methods of curing pork and bacon—the brine method and dry curing. Different recipes are used with each method. The meat should be thoroughly cooled before curing is undertaken.

## Dry Curing.

This is probably more successful with the smaller cuts of meat (side meat in general) than with the larger and thicker shoulders and hams. Best results will be obtained if the curing can be done in a cool, rather moist and well ventilated cellar.

A barrel or box is a desirable thing in which to stack the meat while curing. In absence of these, piling on open shelves in a good cellar may be found sufficient.

No. 1—This method consists in thoroughly rubbing into the meat a good grade of fine salt. The meat is piled for two or three days and fresh salt rubbed in. This is repeated for three or four times when the meat is finally piled until needed. The hams and shoulders need special attention to insure the salt reaching the bone so as to prevent "souring" in this region. Penetrate to the bone in two or three places with a knife and force salt into the holes.

No. 2—For each 100 lbs. of meat use the following:

- 4 lbs. salt.
- 1 lb. New Orleans sugar.
- 6 oz. black pepper.
- 2 oz. saltpetre.
- ¾ oz. cayenne pepper.

Mix the ingredients thoroughly. Rub one half of the mixture into the meat as recommended above. After 2 weeks rub in the remainder. Let lie for 6 weeks, then hang and smoke. Meat should cure in a cool moist place.

No. 3—For each 100 lbs. of meat the following mixture is used:

- 5 lbs. salt.
- 2 lbs. granulated sugar.
- 2 oz. saltpetre.

Mix thoroughly, divide in three equal parts and rub in one third every three days till all is used. After 10 days or 2 weeks in a cool moist place the meat is ready for the smoke house.

## Brine Curing.

This method gives better protection from insects and vermin, but trouble is sometimes experienced in keeping the brine. If, however, the vessel is clean and the brine is boiled (being cooled before using) no trouble should be experienced especially in cold weather.

Watch the brine closely and if it becomes thick and "ropy" the meat should be removed, the brine skimmed and reboiled or a new brine made.

A cool moist place is best for brine curing.

**Dry Salt Pork**—Each piece of meat should be rubbed with dry common salt and let to drain over night. Next day pack the pieces snugly in the vessel and pour over them the following brine previously cooled:

- 10 lbs. salt.
- 2 oz. saltpetre.

Dissolve in 4 gallons of boiling water. This is sufficient for 100 pounds of meat. Keep the pork in the brine till used.

**Sugar Cured Hams and Bacon.**—Rub each piece of meat with table salt and let it drain for 12 hours. Pack tightly in a barrel, hams and shoulders usually in the bottom. Pour over the meat the following brine previously cooled:

- 8 lbs. salt.
- 2 lbs. brown sugar.
- 2 oz. saltpetre.

Dissolve in 4 gallons of boiling water. Boiling is not necessary in winter but it is always safer. This is sufficient for 100 pounds of meat. Bacon cures in 4 to 6 weeks, hams and shoulders 6 to 8 weeks. When smoked this meat may be kept all summer.

**Molasses Curing.**—This is used chiefly for hams and shoulders. For 100 pounds hams and shoulders use the following:

- 4 qts. fine salt.
- 2 oz. pulverized saltpetre.

Molasses to make a pastry mixture. Cover all over the hams and shoulders, more thickly on the flesh side. Place skin side down and leave for 3 or 4 days. At the end of this time make the following brine:

- 7 lbs. salt.
- 5 lbs. brown sugar.
- 2 oz. saltpetre.
- ½ oz. pearlash or potash.
- 4 gal. water.

Heat gradually. As the skim rises remove it. Allow to boil cook and pour over meat packed in barrel.

A 15-lb. ham or shoulder is cured in 5 weeks, larger ones will require 8 weeks.

Dry well before smoking.

## Smoking and Smoke Houses.

**Houses.**—For best results a smoke houses should be from 8 to 10 feet high. This prevents the meats getting too warm. Good ventilation should be provided to carry off the warm air. This can be provided by small holes under the eaves or a chimney in the top. Too free circulation of air is wasteful of fuel.

Large boxes can be used by placing the fire outside and conducting the smoke to the box by a pipe. This prevents the meat becoming too hot.

A large barrel can be arranged the same way and is even better than a box. The meat is suspended from bars across the barrel near the top, though not so close as to prevent the lid fitting fairly tight. The fire is kept in a covered pit in the ground some feet away. The smoke is conducted to the barrel in a stove pipe buried a foot or two and entering the bottom of the barrel.

**Fuel.**—Hard wood is best for smoking, though corn cobs are very satisfactory. Soft or resinous woods should never be used.

**The Meats.**—Remove from the

brine the meat to be smoked. Wash it in warm water, using a brush. This prevents the formation of a cake of salt on the outside which would keep the smoke penetrating.

**Smoking.**—In winter when the meat is apt to chill or freeze, smoking should be continuous. In milder weather a fire every 2 or 3 days for 2 or 3 weeks gives good results.

Three or four days of continuous smoking is sufficient, though some recipes call for 4 to 6 weeks of slow smoking.

## Trying Out Lard.

Choice lard can be made only from the best clean fat. The leaf or kidney fat is most desirable. Trimmings from the sides, hams, and shoulders as well as the fat from the entire neck may be utilized. Intestinal fat gives the lard a strong odor and should be rendered and kept separate. Cut the fat into pieces about 1 or 1½ inch square. They should be of uniform size so they will cook in about the same time. The least possible lean should be left on the pieces as it is only wasted, and furthermore it is apt to stick to the kettle and impart a scorched flavor to the lard.

An iron kettle gives a more uniform and even heat. Fill the kettle about ¾ full and put in a pint or more of melted lard or water to keep the pieces from burning at first. Cook over a slow and even fire with frequent stirring till the lard is perfectly clear and the "cracklings" assume a light brown color and float on the surface. Any cloudy appearance in the lard denotes the presence of water, and this interferes with its keeping qualities, especially in summer. When done, remove the "cracklings" and let them drain in a colander. Strain the lard through a fine sieve or cloth to take out the finer bits. Occasional stirring as the lard is cooling tends to whiten it and give it a smoother texture.

## Making Sausage.

Any clean bits of the lean pork may be used for sausage. For a good mixture 3 pounds of lean to one of fat are recommended. The relative amounts of sausage and fresh pork desired will govern what parts other than the scraps will be converted into sausage. The entire tender loin, what lean can be cut from the ribs, and even the shoulders are often used. Run the mixed lean and fat through the cutter, season, and run through again to insure even distribution of the seasoning. If care is taken, the uncut meat may receive the seasoning, in which case once cutting is sufficient. To each 4 pounds of meat the following amounts of seasoning are about right: 1 oz. of pure fine salt, ½ oz. of ground black pepper, and ½ oz. of pure leaf sage rubbed fine. The best test as to the right amounts of seasoning is to cook a cake and taste it before finishing the work.

Sausage casings are not always at hand and some people even prefer a substitute made by sewing strips of a cheap grade of bleach into sacks of a diameter of about 3 inches. These are tightly filled by pressure from the hand on the outside forcing the sausage down. After filling, the bags are tied and melted lard poured over them to seal the bags and prevent the escape of moisture. This done, the sausage will keep for months. The bags of sausage may be smoked if such is desired.





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In putting your machinery away take off the ropes and canvasses and store them away where the mice or anything else can not destroy them.

Provide plenty of good water for the livestock this winter. Remember it should not be ice cold if you want to get the best results.

Will some one answer us:—Why is it that a red cow can eat green grass, give white milk and make yellow butter?

We often expect more of our dumb animals than we are willing to do ourselves. Think this over.

To be contented with the things you have, is happiness. We some times think we would be happy if we could only get the things we want, this would not always prove to be true.

Get your manure out on the farm just as soon as possible. It is poor policy to allow manure to be around in heaps or puddles at this time of the year, it should be out on the land.

One or more good cats around the farm will help destroy the mice or rats, which cause a large amount of waste on the average farm. The granary, the corn shocks and other things all help bear their part of the burden of a loss by mice each year.

#### PREPAREDNESS.

Are you prepared for the winter storms? Have you provided shelter for the livestock? Have you plenty of wood and kindling for the wife and in such a place as it will keep dry? Have you put your barn yard in good shape, with a drain to carry of the wet that will come from the winter storms? Did you haul a few loads of gravel for paths and to put in the barn yard? These are only a few of the questions we might ask about your preparedness for the winter, both for your self and your cattle. A little of this kind of preparedness will lighten the work and make it much more pleasant for all concerned, and it will pay in dollars and cents to do just such things that are here suggested.

#### LEARN BY READING.

What we learned yesterday may not be true today, and no one is safe in blindly following the principles that was practiced years ago in farming. For the average farmer there is no better way to keep face with the progress that is being made in farming than by reading. There is no such a thing as standing still, you must progress or retrogress. New conditions are to be met every day. New pests to fight, new conditions and methods of marketing the products of the farm. Now the man who does not read is going to have a hard time to keep up. If he does not know how to meet all these changing conditions he must make way for the fellow who does. A good help, to be a progressive farmer is to read and keep up with the best agricultural development of the day.

#### ORGANIZATION FOR FARMERS.

Farmers should organize in clubs for the study of better farming. They should know more about marketing and the value of co-operation. It seems that every other industry has learned the value of getting together and why don't the farmers? The farming business has many problems in it, and by co-operation they can be solved. No one man can do it. These clubs can take up a systematic study of their conditions and with the help of experts, they can secure, and the exchange of practical experiences by members of the organization, can bring about a much better condition for every member of the club. If the farmers don't do this they will find that the other fellow, the one who buys your products, will have you in his grip and make the prices and terms to suit themselves. From another point of view, who fixes the price paid for eggs at country store, for cream at your station, for wheat at the mill? Not the local merchants or local buyer in most cases, it is the big packers or similar organizations. Now what are the farmers going to do about these problems. Organization will greatly help, it will not however, cure all the troubles.

#### "GO TO SCHOOL DAYS."

"With the hope of intensifying interest in the schools of the county" one of our county superintendents has set apart three days to be known as "Go to School Days." A contest will be conducted by all the schools of the county to see who can secure the largest per cent of visitors during the three days. It is necessary to resort to these kind of methods to get parents to visit our schools? The movement is a good one and we hope it will awaken the interest desired by

the teachers. Parents should "go to school" once in awhile and see how their children are doing. Get acquainted with the teachers and co-operate with them for the best interest of your children. If you will show an interest of this kind in the child there is no doubt but what it will increase the efficiency of the teacher and school. Parent-Teacher associations are a good movement, how much are you helping in this work. Don't expect too much of the teacher unless you show some interest yourself. If you can't "go to school" get acquainted with the teacher and find out how your children are doing in their school work.

#### TAKE INVENTORY—KEEP RECORDS.

It is now only a few short weeks to the end of the year. This is the time of the year when merchants and many others take an inventory of all they own and all they owe. Do you have such a record of your farm, do you really know what your assets and liabilities are? We received a letter from one of our subscribers this week asking for books, such as were recently recommended in our paper, he proposed to start the new year right. With the Farmers' Account Book and a small ledger to keep other accounts in, he will be able to find out during the coming year where he is making the most money. If he or any one has any question in regard to this matter of farm inventories or accounts we have experts who will be glad to answer them. In this way we are asking you to do something in which we are willing to help, because we know it is the right thing to do. Take an inventory of all you own, keep a record of all you do, and you will soon learn their value and will always continue to do it. It now seems that sweet clover has found a place in our farming. For years it was considered a weed and in many places "was a plant out of place" because the trouble it gave many farmers. Now, it is a profitable crop in helping to redeem some of our farm land.

#### PACK YOUR OWN MEATS.

Can any good reason be given why we don't pack or cure more meats on our farms? It is poor economy to buy meat at the present high retail price. We should raise it, we should produce more livestock on our farms. Many reasons can be given for doing this. Read the feature story this week by Dr. W. E. Carroll and see if you will not become more interested in raising and curing more meat.

In some places the small packing houses is advocated. Study the present method of marketing our livestock and see if some way can not be worked out to save the cost of "farm to packing house and then back to consumer." Just think of the different profits made in all this handling. The shippers; profit, the man who collects and forwards the stock to market. Freight charges, expense of long distance haul. Railroad terminal charges and cost of yardages in the stock yard previous to sale. Cost of feeding at yards and then the commissions charges for selling. The packer he makes a profit, the salesman has expenses and then comes the railroad expense of distribution. The retailer he must have another profit and so we might refer to others that are added in the packing and selling of our farm products. With all of these reasons, and others you can think of, it seems to us every farmer should cure some meat for his own use and a little for the local market.



## Questions and Answers

### FARM DITCHES.

Newton, Utah.

Utah Farmer:

Gentlemen:—Would you please inform me through your valuable paper on the following points regarding Farm Ditches: Wm. P. Hansen. Answered by L. M. Winsor.

No. 1. What is the best shape of ditch to make to get the water onto the land?

The main farm ditches should be made with strong banks capable of handling the maximum streams which they may be required to carry. Ordinarily, the banks are constructed with side slopes (1 foot horizontal to 1 foot vertical). If constructed in this manner they will gradually assume a natural, permanent shape. The banks should be smooth so that weed growth may be easily removed, either by the use of the mower, or the scythe, or by cultivation. The proper fall for the farm ditch depends, in a measure, on the amount of water which it is required to carry. Ordinarily, however, a slope of from .05 to .1 of a foot in 100 feet will be ample. If the slope is heavier than .1 in 100 the ditch will be likely to cut. Wherever possible the surveyor's level should be applied in laying out farm ditches as it is impossible to judge with the eye where the water will run to the best advantage.

No. 2. What is the best position with regard to the land to be watered to make the ditch?

The ditch should be run across the upper end of the land with a grade very nearly level so that the water may be distributed uniformly to the various sublaterals. Where this is not possible, the use of checks or drops may often be advisable, so that in this way the ditch is built in sections, each section being constructed very nearly on a level or with but a very light grade.

No. 3. What is the best position for the laterals and what is the best way to make them?

The position of the laterals with reference to the land depends upon the method of application. If the soil is gravelly or sandy and the flooding is the method of application used, it is often advisable to run the laterals parallel to the slopes of the land, placing these laterals from 100 to 200 feet apart, and using the laterals for the distribution of the water. By this means the water is carried in several laterals at one time and is spread over the land at successive points from top to bottom of the laterals. In this connection the Canvas or Witcher dam is very useful. At first the water is turned in at the head of the strips between the laterals and allowed to flood as far as it will run conveniently; then the dams are placed at a point, say 200 feet, from the head of each lateral, and the water turned in to as many laterals as the stream will supply. From the point where the dams are placed the water is allowed to flow out on each side and again floods the strips between the laterals to a point, say 400 feet, from the head of the land. The dams are then carried down the laterals to a point 400 feet from the head. This operation is repeated until the land is

entirely covered. If the furrow method is used, the laterals run parallel with the ditch across the head end of the land and should be made so that the water stands on a level from one end to the other. This makes it easy to distribute the water into the furrows uniformly.

The best device for constructing laterals consists of a double mold board plow with extension wings riveted to the ends of the mold board. Such a plow can be made by placing the beams of a right and a left mold board plow together and reconstructing in such a way as to have but one set of handles. Such a device is described in Bulletin 145, Office of Experiment Stations, U. S. D. A. Washington, D. C. With this device from four to six horses are used in making the ditch or laterals, and no shovelling nor cleaning out will be necessary. Where the double mold board plow is not available an ordinary mold board plow may be used by running up and down the laterals twice or more times, and following this with a "V"-shaped crowder, one wing of which is made from twelve to eighteen inches shorter than the other. The short wing should be fastened on to the long wing with a hinge so that an adjustable spreader bar may be used, making the crowder suitable for large or small ditches as desired.

No. 4. Which is better—furrow or flood irrigation?

The best method of application depends very largely upon the nature of the soil and the crops to be irrigated. As an ordinary guide, however, it may be stated that with heavy soils the furrow method if irrigation may be considered advisable, while with light sandy soils the flooding method may be used. In the growing of such crops as sugar beets it is not desirable to use the flooding method, regardless of the kind of soil, while with alfalfa irrigation or with irrigation of pasture grasses it is usually desirable to follow the flooding system. The farmer must be governed very largely by his own judgment in these cases. Generally speaking, however, it is considered that the furrow method is somewhat more economical of water.

No. 5. What is the best kind of measuring device to use?

The measuring device usually recommended to the farmer is the trapezoidal weir, where sufficient fall is available. This weir is easily installed and where installed properly may be used successfully by the ordinary farmer. Where the canal has a very light grade the rating flume is often resorted to, but this method of measurement is seldom satisfactory in farm irrigation. In the first place, the services of an engineer are necessary very frequently to give proper rating to the station, and conditions change so easily that the rating recommended can seldom be relied upon by those not accustomed to its operation.

No. 6. How is water measured?

The use of the trapezoidal weir is fully described in Circular No. 6 of the Utah Experiment Station. A very limited number of these copies is

available and will be mailed upon application.

No. 7. What is the best kind of dam to use to get the water out of the laterals?

As indicated above, the Canvas or Witcher dam has been considered most satisfactory as a movable dam for use in farm irrigation. However, where it is possible, permanent head gates should be constructed. In this connection it is advisable to have the farm ditches, and as many of the farm laterals as possible, permanent which will admit of the construction of permanent head gates and reduces materially the cost of ditch work on the farm.

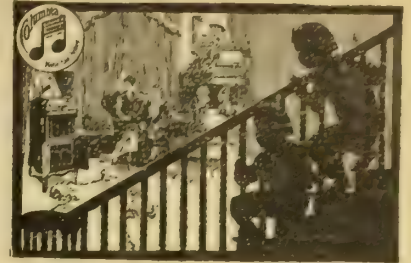
No. 8. What is meant by "the duty of water?"

The duty of water means the relative amount of water used per acre in crop production. For example, if sufficient water is applied to the land during the season to cover it fifteen inches deep, we say that the duty of water is fifteen acre-inches per acre. A high duty means a small amount of water used per acre, while a low duty means a large amount of water used per acre.

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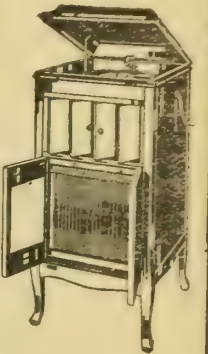
Here you are offered a world-famous musical instrument and a record cabinet combined in one. The Cabinet is an exclusive COLUMBIA FEATURE. It protects your records when you are not using them—and when you do want them, "press the button—out comes the record you want."

Price of the "LEADER" ..... \$85.00  
Price of 12 double-disc Records ..... 7.80

Price of outfit complete ..... \$92.80  
Freight prepaid to your R. R. Station.

TERMS—\$10 Cash Balance in easy monthly payments.

*Daynes-Beebe Music Co.*  
ESTABLISHED 1860  
45 MAIN ST. SALT LAKE CITY, UTAH  
"OLDER THAN THE STATE OF UTAH"



THE BEST \$45.00 strictly all oak tanned western Double Team Harness on earth with breeching and collars for



**\$36**

our new Catalog sent free

Hame tugs, 1½ inch, with three loops and patent buckle. Traces 2½ inches solid single ply, with cockeyes.

THE FRED MUELLER SADDLE & HARNESS CO.,

1413-15-17-19 Larimer St., DENVER, COLO.

HOGS! HOGS! HOGS!

—Red Jersey Durocs—

The Spring Lake Stock Farm, Payson, Utah, will sell at pork prices for the next 30 days 200 head—Hurry—U. R. Next.

In addition to high food value, silage supplies succulence, which makes it easily digestible and keeps the systems of cows toned up. This tends to provide June conditions in the dairy in January, and results in a full milk flow.

Read the advertisements in this issue of the Farmer.



## THE HOME

### SEWING LESSON XI. THE MIDDY BLOUSE.

**Chevrons**—Emblems and chevrons in the various sets of anchors, bars, eagles and stars, finished and ready to sew on, can be bought at almost any notion counter, but they are never as satisfactory as the designs that can be stamped on the dress itself. Sometime the figures are worked in the center of a piece of broadcloth or linen, which is cut square or oblong or in shield shape, and sewed to the sleeve.

The chevrons or stripes are not padded, but should be made of strips of scarlet flannel three-eighths of an inch wide, separated one-fourth of an inch and sewed on flat with an overlock stitch of scarlet silk on the edges.

In working the specialty marks and eagles, an excellent plan is to baste a piece of canvas or crinoline on the wrong side of the material, and work right through it, cutting the edges of the canvas away after the figure has been completed.

Light-weight twisted embroidery silk, mercerized cotton, or a linen thread may be used for this work. The threads should all be placed in such a way as to lie next to one another but not to overlap.

On suits of galatea, chambray, linen or any of the cotton materials, the work may be done with cotton, either plain or mercerized. This thread is more suitable than silk for suits which need frequent washing. The sleeve emblem may be repeated on the front of the blouse or shield, or a simpler design—a star or anchor, for instance—may be used if preferred.

The middy blouse makes an excellent school or play blouse and is particularly good for gymnasium suits.

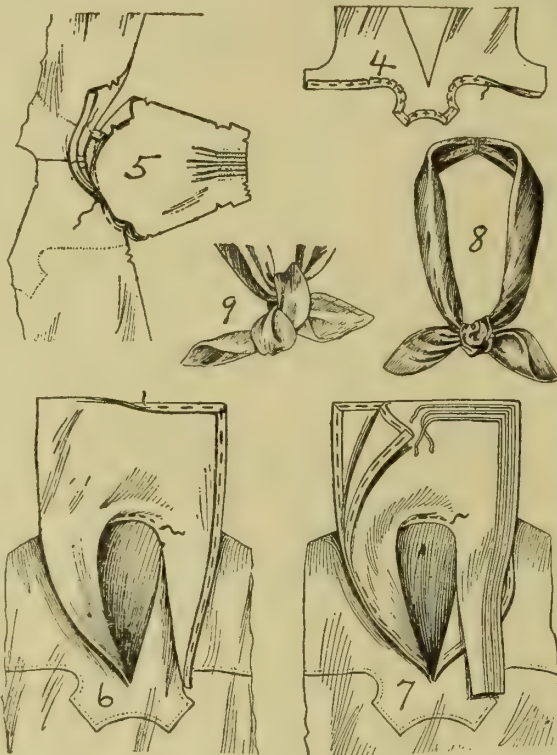
**Materials**—Dark navyblue flannel and bleached cotton drill are the materials used for these blouses or over-shirts. According to the regulations covering the uniforms of officers and enlisted men of the navy, the dark blue flannel blouses are trimmed with white linen tape, while the cotton drill blouses are made with sailor collars and cuffs of dark blue flannel, which are also trimmed with the tape.

Besides the regulation navy blue and white, brown, gray and red and the unbleached "khaki" shades are considered quite correct for sailor dresses. Serge and cheviot are appropriate woolen materials, while linen, duck, pique, gingham, galatea, etc., are a few of the suitable wash fabrics.

The rating badge should be made

of the garment material. In blue materials, the eagle and the specialty marks should be worked in blue silk. The naval uniform regulations further order that the rating badge shall be worn by all petty officers of the star-board watch on the right sleeve, midway between the shoulder and the elbow; by all petty officers of the port watch the badge is on the left sleeve. This statement eliminates any doubt as to the correct placing of the rating badge, as, in accordance with these instructions, either sleeve is correct. The chevrons show the class of the officer, while the specialty marks indicate his position in the marine service.

The emblem may be placed on the shield also, and a five-pointed star should be embroidered on both corners



- No. 4—Turning under the edges of the yoke.  
No. 5—Joining the sleeve to the blouse.  
No. 6—Putting the collar on the blouse.  
No. 7—Facing the collar.  
No. 8—The neckchief.  
No. 9—Tying the knot.

of the collar. Excellent transfer stamping patterns can be purchased for the emblems star, etc.

**Putting the Blouse Together**—Baste the seams with the notches matching, and try the blouse on, either by slipping over the head or lapping over the fronts, as directed in the pattern instructions. If a yoke-facing is used, the under-arm seams are left open to simplify the work. The shoulder seams of the blouse are joined with the seams toward the outside. The center-back seam of the facing is closed on the wrong side. Stitch and press the seams open.

The lower edge of the yoke is turned under a seam's width. The turned-under edge at the sharp points must be lapped and the edges clipped at the curves as shown in Illustration No. 4, to make them lie flat.

Lay the blouse flat on the table, spread out its entire length. Place the yoke on the blouse so that the

## We All Agree With Grandmother

**S**HE says the **PERFECTION HEATER** makes things so cozy and warm that she would'n't be without it.

It's so economical too. The **PERFECTION HEATER** gives us 10 hours of solid comfort on a gallon of kerosene oil.

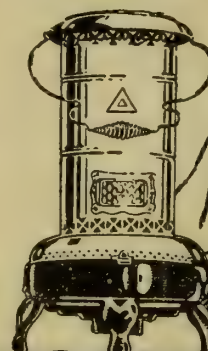
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**THE CONTINENTAL OIL COMPANY**  
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Butte    Albuquerque    Boise

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# PERFECTION

## SMOKELESS OIL HEATERS

neck and armhole edges are even and the yoke lies smoothly on the blouse. Pin the yoke to hold it in place, then haste and stitch it to the blouse.

**The Sleeve**—Plaits are made in the regulation sleeve by creasing from the perforations at the bottom to the corresponding perforations at cuff depth. These creases are brought over to the position marked by perforations, and the plaits are stitched along the edge before the sleeve seam is closed.

Illustration No. 5 shows how the blouse may be laid out on the table for convenience in joining the sleeve. Baste the sleeve to the yoke with the usual three eighths-of-an-inch seam and then stitch it. Turn under the armhole of the blouse three-eighths of an inch, baste it over the seam, and fell it down. Make a second stitching on the body of the blouse one-quarter of an inch from the seam. Or the sleeve can be laid on the blouse with its upper edge even with the armhole edge of the yoke and blouse and their right sides together. Stitch them in a three-eighths-of-an-inch seam, turn the seam edges toward the sleeve and stitch them to the sleeve.

The underarm and sleeve seams have been left open until now, making the work easier to handle and also making it possible to sew the rating badge on the sleeve properly.

Close the underarm seams and the sleeve seams as notched, using flat

felled seams. A placket is sometimes made in the sleeve at the wrist, which is closed with buttons and buttonholes.

A hem is turned up at the bottom of the blouse, and, if desired, an elastic may be inserted to hold the blouse in place. Or a casing stay with an opening at each end may be sewed across the center of the back. Insert a tape in the left opening of the stay, pushing it through to the right end of the stay and tacking it there. Insert another tape in the right opening, tacking it at the left end of the casing. The back can be drawn in on the tapes.

**The Collar**—The collar is joined to the blouse with the seam toward the inside. (Ill. No. 6.) The collar is marked with notches showing where it joins the blouse, and, in basting it on, the edges should be stretched between the notches to fit the corresponding edge of the blouse, to make the collar roll closely about the neck. The outer edges are turned under three-eighths of an inch and basted down.

The collar-facing is trimmed with three rows of linen tape, set its own width apart and stitched on both edges. Baste the tape carefully to the facing and stitch it on both edges. (Ill. No. 7.)

The outer facing is placed on the collar carefully so that the roll perforations will come exactly together,



and the ends are slipped under the fronts. (Ill. No. 7.) Baste along the roll perforations. The neck edge of the facing is stretched sufficiently to make it lie smoothly when the collar is rolled back. After pinning the collar-facing around the neck and down the front, roll the collar and facing over at the perforations. Put your hand under the collar and smooth it outward, so that it does not wrinkle on the collar-facing.

Turn the edge of the collar-facing under, even with the collar. Baste the collar and the facing together across the bottom and the two sides.

A row of stitching as close to the edge as possible should run around the entire outer edge of the collar. The inner edge of the collar-facing must be turned under three eighths of an inch. Wherever it is necessary it must be clipped or eased. After the edge is turned under, it is basted and felled to the blouse.

**The Shield**—The shield is cut in one piece and may be simply hemmed, or, if preferred, lined throughout with lawn or cambric. It is trimmed with an emblem or star.

After both the blouse and shield are finished, it is a good idea to make a few buttonholes along the neck-line of the body part, under the collar, sewing buttons in corresponding positions on the shield to prevent it from slipping around out of place. A crow'sfoot may be made at the lower end of the neck-opening in front.

**The Tie**—The neckerchief or tie worn with the blouse by a sailor of the navy is made of a square of black silk tied in a square knot, leaving ends from four to six inches long. This square piece is folded diagonally and then rolled up, with the two overlapping corners folded into the material and held together by an elastic, as shown in Illustration No. 8. The other corners are tied at the lower end of the collar in a square knot with a corner extending from each side. By studying Illustration No. 9 the method of tying a sailor's knot will be easily understood.

The ties which are worn with the middie blouse are made of black silk or of silk or a contrasting color. With the dark blue blouse the tie should be of black or of scarlet silk. With a white blouse a white silk tie may be worn or one of black silk or of scarlet.

The collars of blue blouses are usually faced with blue, but they may be faced with white or scarlet, while the white linen and cotton blouses are frequently faced with dark blue, linen blue, or scarlet, or if one prefers, the facing of the white blouse may be of the same material as the blouse, and nothing is prettier than the all-white blouse with which a white silk tie is worn.

For the Summer, for play dresses or for gymnasium suits the middie blouse is frequently made with a short sleeve. For cold weather and for school, the long-sleeved blouse is more practical and comfortable than the one with the short sleeve.

Cover carrots, beets, and other root crops lightly with dry sand to prevent wilting.

Have a few rhubarb plants been dug to grow in the cellar this winter? They will furnish good sauce if put in a dark cellar and allowed to grow.

#### THE MAKING OF SAUER KRAUT.

Select hard, well-developed cabbage heads. Remove the outer leaves, leaving only the crisp, white portion, then with a knife or special instrument made for the purpose, remove the core of the cabbage. Cut the cabbage on a kraut-cutter which can usually be obtained at a hardware store at a nominal price. These cutters vary in size from one to six-inch knife blades, a little box fitted into the groove of the frame holding the knives in such a way as to permit the box to move back and forth over the cutting edges. The prepared cabbage heads are placed in this box and thus sliced with the knives below.

The knife or cutter is generally placed on top of the vessel containing the kraut. A crock or stone jar holding from five to fifteen gallons is the best receptacle to use, on account of its cleanliness, and for family use. Proceed to fill the vessel or jar as follows:

Sprinkle a thin layer of salt in the bottom of the vessel, then place two inches of kraut on top, then sprinkle this layer with salt sufficiently to show the salt on the kraut. Proceed in this manner until the vessel is full. At intervals, pack the kraut down firmly in the vessel. For a ten-gallon container, use a pound to a pound and a half of salt. After the vessel is filled and packed down firmly, take a clean piece of broad that will fit inside of the receptacle and place this on top of the kraut and weight it down with some clean stones or anything that will keep the kraut under pressure.

In a few hours, the water from the kraut will rise to the top and above the kraut. It should be left in this condition until ready for use.

It requires from four to six weeks before the kraut is ready to be utilized.

The receptacle containing the kraut should be kept in a cool, shady place.

On a commercial scale, the kraut is generally packed in barrels, and the makers pay little or no attention to the amount of salt used, as it becomes a habit with them in sprinkling a layer of salt over a layer of kraut.

The packing of the kraut is very important. Only sound cabbages should be used.—E. P. Sandsten, Colorado A. C.

#### WINTER VEGETABLES.

Although the season for fresh vegetables is over the housewife should make it a point to include a generous amount of our so called winter vegetables in the diet. They lend a pleasing variation and are an important source of various forms of mineral ash, as iron, sulphur, etc., that is needed to "tone up" the blood.

Onions for example contain sulphur oil and are taken for insomnia. Turnips and parsnips have peculiar "oily principles" of value as a laxative. Cabbage and celery are excellent for scurvy on account of their sulphuric compound and iron.

#### Stuffed Onions.

- 6 large white Bermuda onions.
- ½ c. milk.
- 1 egg yolk.
- ½ c. bread crumbs.
- 1 c. cooked ham—ground.

Cook the onions in hot salted water until almost tender. Remove the centers and chop these with the ham, seasoning the mixture to taste. Add the beaten yolk of the egg, add the

milk and bread crumbs. Fill the onions with these ingredients, put a bit of butter and crumbs on top of each, place in a shallow buttered casserole and bake about 20 minutes basting with butter and hot water.

#### Variations.

1. Bake the boiled onions in thin white sauce with crumbs on top.
2. The onions may be filled with fresh pork sausage.—M. M. Haynes, Colorado A. C.

#### COLLECTIVE BUYING.

You can save money by collective buying. The Benedicts Club, which is made up of the married male students of the Utah Agricultural College are saving this year by collective buying 2 cents a pound on their winter's pork, 90 cents a ton on coal and are getting from 2 per cent to 15 per cent reduction on all staple household necessities.

Lumber, nails, paint, cement, and all building materials, burlap sacks, farm machinery, fencing wire, coal, blooded stock for the farm, and every thing that the rural community may need, can be secured through collective buying at a saving of from 5 to 50 per cent.

Bear River Valley farmers save 40 per cent on their fire insurance premiums through organizing a local company which gives them guaranteed protection for a minimum price. Every community can save money by intelligent collective buying as well as collective selling.

#### INSTITUTES AND SCHOOLS

The Extension Division of the Utah Agricultural College have arranged to give the following institutes and schools during 1915-1916. Farmers who live near these places where the meetings are held should attend them.

#### Institutes and Schools.

1915-1916.

<b>November.</b>			
29-30,	Weber County.		
<b>December.</b>			
1-4,	Weber County.		
4,	Institute, Jordan	High	
	School.		
6-11,	School, Delta.		
11,	Institute, Jordan	High	
	School.		
13-15,	Mt. Pleasant.		
18,	Institute, Weber County.		
<b>January.</b>			
8,	Institute, Weber County.		
10-22,	Round-Up, Monroe.		
15,	Institute, Granite.		
17-28,	School, Jordan	High	
	School.		
22,	Institute, Granite.		
22,	Institute, Weber.		
24-31,	Round-Up, Logan.		
<b>February.</b>			
1-5,	Round-Up, Logan.		
7-19,	Round-Up, Cedar.		
7-12,	School, Granite	High	
	School.		
21-26,	School, Beaver.		
28,	American Fork.		
<b>March.</b>			
3-4,	Tooele.		

Hardwood cuttings of grapes, willow and dogwood may be taken now and buried in sand until spring. They may then be set three inches apart in nursery rows with three feet of space between rows.

Cover the strawberry bed with about four inches of straw to hold the snow.

## Your Farm Equipment

should include "Never-Rip" work clothes.

—They'll give lasting service and pay for themselves many times over, in lightened labor, clothing saved and in service given.

—For that big farm or for the little backyard garden this Spring, there's no assistant more able and useful than

SCOWCROFT  
**NEVER-RIP!**

—1200 farmers and workmen ask for them by name every day—

—because they know that entire satisfaction is guaranteed when the label says "NEVER-RIP."

## Shoes Repaired By Parcel Post

#### BIG SAVING IN SHOE BILLS.

Shoes are repaired same day as received and returned by C. O. D. Parcel Post, and delivered to your door. It is just like having a modern, well equipped shoe shop on the place.

Price list: Mens half soles 75c, ladies half soles 50c, heels straightened Men's 35c, Ladies 25c, rubber heels 40c and 50c. Patch 10c and up.

It will save the 10c C. O. D. charge by sending repair charge and postage with shoes.

#### Royal Shoe Repairing Co., Inc.

38 So. Main St., Salt Lake City, Utah.  
2473 Washington Ave. Ogden, Utah  
7 Main St. Logan, Utah.  
8 Carr Fork, Bingham Canyon, Utah.  
Spanish Fork, Utah.

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A Western School  
teaching  
Western Business Methods  
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Write us for descriptions of courses.  
**Western Correspondence School**  
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Now is the time to renew your subscription to the Utah Farmer.—Do it TODAY.



## Agricultural Lesson XIV

### MEANS OF CONTROLLING THE WATER CONTENT OF THE SOIL.

Prof. J. C. Hogenson.

1. Water is prevented from leaching through soils by modifying the texture of the soil and by adding organic matter to it, also by plowing and cultivation which tend to loosen the soil and thus make it able to retain more water.

2. Water is prevented from evaporating from the surface by the formation of mulches, which act as a blanket to keep in the moisture. When no mulch is formed the capillary tubes extend from deep down in the soil to the surface. By the creation of a mulch these tubes are broken off and thus the water is prevented from reaching the surface. This mulch soon dries up completely and as dry soils will not allow water to pass through them nearly so rapidly as wet soils, they made very effective mulches. Foreign materials such as manure, straw, leaves, sawdust, sand, etc., when spread over the surface of the soil also act as mulches and thus help to keep water in the soil.

The mulches made from natural soil in the field are the most effective. mulches from 2 to 3 inches deep are more effective than shallower ones. The harrow and disc are good implements with which to make mulches. A mulch should be renewed after each heavy rain storm and at intervals between, say once a month. If this is not done capillary connection is established with the under soil and much water is lost.

Water is also prevented from evaporating into the air by establishing wind breaks by means of trees or shrubs. The water content of the soil may be increased by improving the texture of the soil which is done by plowing, harrowing and cultivating, by increasing the humus content of the soil. This is accomplished:

1. By adding manures or other organic refuse.

2. By the addition of Green manures which should either be a cereal or a legume and should be plowed under in the fall, this has a tendency to loosen up the soil still more than merely plowing. It also insures a sufficient decay of the green material before the next crop is planted. In addition to increasing the water holding power of the soil this also adds considerable available plant food.

3. The water content of the soil may be increased by deep plowing and subsoiling. Subsoiling creates a larger reservoir for the storing of moisture. The soils best adapted to this treatment are the compact soils with a very hard and impervious subsoil. Subsoiling should be done in the late fall so that the water which is already in the soil will not all escape by coming in contact with the air and so that the reservoir will be ready to receive the winter rains and snows. The subsoiler is usually run along the furrow after the plow and loosens the soil to a depth of from 15 to 20 inches.

The fourth method of increasing the water content of the soil is by irrigation, which is largely practiced in the west where the rainfall is light. The water from the mountain streams and rivers is led onto the

land by means of canals and the desired amount of water allowed to soak into the soil.

Decreasing the water supply of the soil is done by drainage and by surface culture. Drainage may be done either by open ditches or tile. The tile drains are usually more effective. The modern tile is made of hard burned clay, is cylindrical in form and usually in foot lengths with diameters ranging from 2 to 12 inches. It is seldom necessary to lower the ground water more than 4 feet below the surface and 3 feet will answer most purposes. The drainage lines are usually placed from 50 to 100 feet apart. The rate of flow of water into and through the tiles depends upon the slope of the surface upon the texture and structure of the soil.

The effects of drainage are:

1. It removes excess of water.

2. It improves the structure and tilth of the soil.

3. It renders the soil more firm.

4. It increases the available water because when roots are forced to develop too close to the surface, the moisture is soon exhausted so that the surface becomes dry, this lessens capillarity although there is an abundance of water below, but the soil below is too wet to allow the development of roots. If the ground water is lowered the roots are permitted to advance deeper and hence have a larger feeding area.

5. It increases the root penetration as stated above.

6. It raises the temperature and lengthens the growing season. If soils are kept continually wet so that water is continually evaporating from the surface the temperature is always low. The ground water is decreased by Surface Culture. By ridged cultivation much more surface is exposed to the action of the sun than in flat cultivation so that water is lost by ridging. Water is also lost by the growth of crops upon the land by transpiration through the leaves as it takes from 500 to 1200 pounds of water to produce 1 pound of dry matter in plants.

#### The Soil Solution.

The composition of the soil solution depends very largely upon the chemical nature of the solid soil. The soil solution is the nutrient medium from which the plant gets its mineral elements and nitrogen, except leguminous plants which get their nitrogen from the air by means of the organisms which develop symbiotically up on their roots.

The factors controlling the composition of the soil solution are:

1. The composition of the solid portion of the soil. All soils contain practically the same elements only in different proportions. Taking samples from where we will and analyzing them we shall find the essential elements in different proportions and amounts in the mineral constituents of the soils. All the essential elements required by plants are soluble to a more or less extent. The rate and extent of the solubility are determined.

(1) By the fineness of division of the soil particles.

(2) By the material already in solution. The more of a certain element already in solution the nearer the saturation point for that parti-

## NOW OFFERED FOR SALE

Several hundred acres of land owned by the Jordan Valley Dry Farm Co. at

### Bluffdale and Riverton Land and Water

The water is from the two new canals. You must act quick for 750 acres of this same tract was sold in a very short time to residents of Herriman and Riverton.

120 acres of the Bluffdale Station of the Orem Electric Interurban are retained for town purposes and each purchaser of land is given an opportunity to buy a pro rata interest in this land at same price as other land.

Price of land and water per acre:

**Under Utah Lake Canal  
\$115.00**

**Under Provo River Canal  
\$80.00**

All reliable persons who earnestly desires to own a farm in Salt Lake County will be given such terms as their circumstances demand. **Deferred interest for two years, 6 per cent; thereafter 8 per cent, on or before ten years' time.**

Francis W. Kirkham, phone Hyland 349-J of Salt Lake City, a director of both canal companies is sales agent and for two weeks will be at Geo. H. Dansie Hotel, Riverton, Utah, Phone Midvale 18-R3.

Or inquires may be made of W. R. Wallace, Salt Lake City, Utah, or Oscar F. Hunter, Salt Lake City, Utah. Thomas Page at Page-Hanson Store, Riverton, Utah, Wm. C. Crump Sr., Bluffdale, Phone Midvale 17-R1 or Thomas Butterfield, Herriman; Phone, Midvale 120-R5—in fact all residents of Riverton, Bluffdale or Herriman, Utah.

cular element the solution is reached and hence less will be taken into solution from then on.

(3) By the time element for equilibrium.

(4) By the absorption phenomenon.  
(5) By Soil acidity, the acids in the soil tend to dissolve substances faster than where no acids exist.

2. The composition of the soil solution depends upon the amount of water present. Where there is a great deal of water in the soil the solution is weak. Where there is less water in the soil the solution is stronger and very often tends to make the soil alkaline. Alkali soils are found where the soil is rich in the mineral elements and where the rainfall is small so that the elements in solution are not carried away by leaching or by surface drainage. Soon the elements accumulate in

## FOR HOME

For your own table, in your own kitchen, use those products that are made at home—you have a double benefit, for the best quality is secured and your money stays at home to come back to you through trade channels.

**USE TABLE AND PRESERVING SUGAR**



large amounts and as they are carried to the surface by capillarity they from a crust there. The soil solution becomes so concentrated that plants cannot absorb it osmosis is from the plant and a barren alkali soil is the result. There are two kinds of alkali, the Black and the White. The Black alkali consists largely of carbonates and is the most harmful to plant growth. It may be remedied to a certain extent by the use of gypsum which changes the carbonate to the sulphate or white alkali which is less harmful. White alkali as already stated consists largely of sulphates, which are not so harmful to plant growth as are the carbonates.

Drainage is the only sure remedy for alkali land. Deep plowing and cultivation also tend to help alkali lands because they lessen the evaporation of water from the surface and hence also the concentration of salts there.

The addition of organic matter also weakens for a time the alkali solution so that for a time after organic matter has been added plants will grow there. The organic matter added also checks to a certain extent the capillary rise of water and in that way helps alkali lands.

#### HORTICULTURAL SOCIETY WILL HOLD TWO MEETINGS.

At Provo December 14-15.  
At Ogden December 16-17.

The Utah Horticultural Society have announced their programs for the two gatherings they will hold this year. The first one will be at Provo December the 14 and 15th. Second at

Ogden December 16 and 17th. The same program will be given at each place. Every fruit grower in the state should try and attend one of the conventions. It is the place where many of the problems that confront the fruit grower can be discussed and should prove helpful to all.

#### Morning Session.

Address of welcome, Mayor C. F. Decker at Provo and Mayor A. G. Fell at Ogden; president's annual address, J. C. Knudsen; report of secretary, W. H. Homer, Jr.; report of committee on by-products, C. H. Smith; state horticultural inspection service, J. Edward Taylor; discussion, appointment of committees on organization and legislation.

#### Afternoon.

"The Relation of the Beet Sugar Industry to the Utah Horticultural Industry," H. S. Cutler; "Utah Canned and Evaporated Fruits," M. S. Woolley; discussion.

At Provo December 15, and Ogden December 17, the program will be as follows:

#### Morning.

"What Place Should Fruit Growing Have in a Well-balanced System of Farming in Utah?" Dr. E. D. Ball; "Outlook for the Fruit Industry in Utah," William M. Roylance; discussion.

#### Afternoon.

"Observations on the Fruit Industry in Utah," C. C. Michener; "Is There An Overproduction of Fruit in Utah and in the United States at the Present Time?" E. H. Smart; discussion.

In Ogden the afternoon session will close with the reading of committee

reports and election of officers for the ensuing year.

Plan your work so you can attend one of the conventions.

#### LAMB FEEDING EXPERIMENT.

(Continued from page 5)

0.813 pound alfalfa, and 0.473 pound silage. Net profit \$1.10.

Lot V, 1.472 pounds shelled corn and 0.90 pound poor alfalfa. Net profit, 98 cents.

Part II of the bulletin takes up the feeding of native lambs. These lambs were fed similar rations to the westerns, and gains were made, on practically the same amount of feed, although the natives weighed 91 pounds at the beginning of the experiment, with the westerns weighing only 53 pounds.

Lot 1 of the natives on shelled corn and alfalfa hay made daily gains of 0.632 pound on a ration containing 2.20 pounds of corn and 0.96 pound of alfalfa. Lot II made 0.523 pound daily gain on a ration consisting of 2.14 pounds of corn, 1.03 pounds of alfalfa and 0.62 pound of silage. Lot III made 0.486 pound of gain daily on 2.80 pounds of ground corn and 1.19 pounds of ground alfalfa. Lot IV made 0.496 pound of gain per day on 1.78 pounds of corn, 0.56 pound of prairie hay, and 1.01 pounds of oil meal.

The cost of producing 100 pounds gain on the western lambs was not a great deal different from the cost of 100 pounds of gain on the natives fed the same rations. For instance, westerns, fed shelled corn and good alfalfa hay, produced 100 pounds of gain at a cost of \$5.11, whereas the natives produced the same amount of gain at

\$4.48. Westerns, fed a ration of shelled corn, alfalfa, and silage produced 100 pounds gain at a cost of \$5.15, whereas the natives on the same feed produced it at \$5.56. The westerns, fed on a ration of ground corn and ground alfalfa, produced 100 pounds of gain at \$6.12, whereas natives produced 100 pounds on the same feed at a cost of \$6.24.

The following prices were used for feeds:

Shelled corn, per bu.....	\$ 0.60
Ground corn, per bu.....	.63
Corn silage, per ton.....	3.50
Good alfalfa hay, per ton.....	10.00
Ground alfalfa per ton.....	12.00
Poor alfalfa hay, per ton.....	7.00
Prairie hay, per ton.....	10.00
Oil meal, per ton.....	35.00

#### LAND CREDITS.

Honorable Dick T. Morgan, representative to Congress from Oklahoma has just written a book on this important subject, while making "A plea for the American Farmer." it should be interesting to every American Citizen. It is logical, forceful, and convincing, with a spirit of fairness. The fundamental principles of Land Credits are clearly set forth. He believes in "government aid" so far as it may be necessary to secure for the farmer adequate credit, and a low rate of interest. Congressman Morgan's discussions are convincing, and its influence will be felt in the final settlement of the Land Credits question when it comes before the 64th Congress which convenes in December. The book contains 300 pages, and is published by Thos. Y. Crowell Co. of New York, and sells for \$1.50 net. adv.

## Six Percent Money to Be Loaned On 5 to 35 years time, with no worry of foreclosure

### HOW WE WILL BE ABLE TO LOAN MONEY AT 6 PER CENT.

We take first mortgages put them together, issue bonds upon them, sell the bonds, lend that money, take first mortgages, issue bonds and sell the bonds and repeat this operation up to 15 times our capital and surplus.

The Inter-Mountain Rural Credit Association will apply these principles to the mortgage business of its members.

A large number of mortgages given by the members to secure loans will be used as the basis for the Association bonds. These bonds will be sold.

The Association will never sell a mortgage given by a member but ALL these mortgages will be the security of the bonds of the Association.

All the mortgages are security for ALL the bonds issued and there must always be mortgages at least equal in value to the outstanding bonds.

In addition to having the bonds secured by an equal amount in mortgages, \$50 of each \$100 collected for the shares will be set aside as a Guarantee Fund, to further secure the bonds of the Association.

The bonds of the Association, thus secured, will be one of the highest class bonds issued in the United States, and will enable the Association to secure capital for its members at the lowest possible rate.

### SEVEN AND THREE-TENTHS PERCENT

a year will pay a loan from us, both interest and principal in 35 years, without commissions, renewal charges, or other expense, and you may pay off your entire loan any time after five years.

On a loan of \$1000, \$73 a year pays both interest and principal. At 8 percent you are paying \$80 a year for interest alone and at the end of the time you owe the principal of \$1000. Can we not explain our plan to you?

This is a Co-operative Association, therefore, you must necessarily become a shareholder in order to enjoy the advantages it has to offer.

Each share of stock will entitle you to a loan of \$1500.00. Your share of stock will net you annual dividends. The stock will cost you \$100 per share, \$50 down, \$25 in 5 months and \$25 in 8 months without interest.

The sooner you join the association the sooner you will get your loan.

Call or mail a postal card today to the

**The Inter-Mountain Rural Credit Association**  
McINTYRE BUILDING. SALT LAKE CITY, UTAH.



# POULTRY

## LEG WEAKNESS—ROUP.

Provo, Utah.

Utah Farmer:

What is the cause of leg weakness. My chickens seems to be affected so that one day they are worse than the next. What can I do for them?

K. J. W.

Answered by Arch Egbert.

The usual use of the term "leg weakness" is to denote an ailment which is found among growing chicks, from one month to six months of age. The chief cause of the trouble seems to be that the bird is growing rapidly and takes on weight faster than his strength will sustain. The disease is also ascribed to such as overcrowding, overheating, close unventilated quarters.

### Treatment.

Remove the cause. If due to feeding fat producing foods, the amount of these should be reduced. Put the affected chicks to themselves. Feed bran, wheat and oatmeal and if possible give skimmilk instead of water. Feed plenty of green feed. Rubbing the legs with tincture of arnica and adding one-half teaspoonful of tincture of nux vomica to each quart of drinking water is recommended.

From the description that you sent in of the trouble with your fowls, I think it is one form of roup commonly known as roup of the eyes. The following taken from a pamphlet on poultry diseases and their treatment may give you some suggestions on how to combat this trouble.

"**Roup of the Eyes.** The first symptom of the eyes is generally an inflammation of the eye-lids. These become red, swollen and hot; then the mucous membrane and glands of eyes become inflamed and begin to secrete a liquid at first clear, and then of a grey, slimy, putrid character, which dries on the feathers at the side of the head, causing them to stick together or fall out. If the secretion is retained in the eye socket, it undergoes a change, becoming a yellowish, solid, cheesy mass of the same appearance as that found in the nasal tumor. This cheesy mass either forces the eye out of its socket, or the inflammation entirely destroys it. These cheese-like masses form in one or two days, and may reappear after many daily removals.

All these affections, described above, may be localized on one side; but often both nasal passages and both eyes are affected at the same time.

When the disease has been introduced into the flock careful precaution may prevent its spread.

1. Immediately separate from the flock any bird that shows symptoms of the disease.

2. Disinfect the yards and houses. A 5 per cent solution of carbolic acid may be used on the yards. Remove the litter from the houses and disinfect freely. This 5 per cent carbolic solution may also be followed by whitewash.

3. Use potassium permanganate in all drinking water.

4. Keep watch of the flock so that any new cases may be isolated at once.

5. Burn or bury deep all birds that die.

The disease is amenable to treatment but this treatment must be individual and requires a great deal of time. It must be continued once or twice a day for quite a long time. It is, therefore, very expensive and consequently impracticable for ordinary stock. Moreover birds apparently cured are likely to become the source of infection for later outbreaks."

## HOW TO PREPARE POULTRY FOR MARKET.

The suggestions that are made here will apply to small as well as larger producers of poultry. The appearance of a bird has much to do with the sale of it. Many of our readers do not ship poultry in large quantities, there are very few however, but what kill and dress some birds each year for the local or foreign market.

The government specialists recommend the particular observance of the following methods of handling dressed poultry, which are essential to a perfect product at any time and are of vital importance whenever weather conditions are unfavorable:

1. Keep the holding batteries for your incoming stock clean, well aired and free from vermin, and see that the chickens have plenty of fresh water and plenty to eat.

2. Don't kill a chicken when the crop is full of feed. Give the chicken only water for 24 hours before it is killed. Food is the crop or in the intestines of a dressed chicken causes loss of flavor and hastens decay, which more than offsets any gain from extra weight.

3. Good bleeding is absolutely essential to a good appearance on the market and retards decay. Circular 61, Bureau of Chemistry, U. S. Department of Agriculture, explains the best methods of bleeding and loosening the feather muscles for dry picking.

4. Hang the chicken by both feet while picking. Hanging by one leg spoils the shape of the bird. Picking on the lap gets the skin dirty and hastens decay.

5. Dry pick if possible. Scalding is particularly undesirable because it hastens decay.

6. Chill every dressed bird until the body temperature is below 35 degrees F. Never pack or ship an imperfectly chilled bird. More decay is due to imperfect chilling than to any other single factor in dressing. Dry chill, if possible. Chickens cooled in water lose flavor, decay sooner, will not cold-store as satisfactorily as dry-chilled, and are in every way more undesirable on the market. Refrigerator cars will carry well chilled goods in good condition, but they cannot chill warm goods to a sufficiently low temperature.

7. Pack in boxes or small kegs whenever possible. A large barrel makes a undesirable package, because where poultry is packed in large masses the weight of the upper layers crushes the birds at the bottom.

8. Line all packages with parchment paper and cover the top of the poultry before the lid is put on.

9. Wrap every head in suitable paper so that blood from one bird

(Continued on page 15)

Following low round trip rates apply from Salt Lake City:

## Home Visitors'

## Excursions

## EAST

Via



November  
20 and 23.

December  
18 and 22.

Limit 90 days  
from date of  
sale.

Denver .....	\$22.50
Colorado Springs.....	\$22.50
Omaha .....	\$40.00
Kansas City .....	\$40.00
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Memphis .....	\$59.85
Chicago .....	\$59.75
Minneapolis or St. Paul.....	\$53.85

Proportionately low rates from other O. S. L. points to many other eastern points.

EXCURSIONS DAILY to Pacific Coast points until November 30th. inclusive.

October and November are ideal months in which to visit the Pacific Coast. When you go, go one way via Portland and see the "Beautiful Columbia River Country."

City Ticket Office  
HOTEL UTAH

# GOING!

To The Expositions

## San Francisco Closes Dec. 4th

Tickets on sale

Daily to Nov. 30th.

Limit December 31st.

Everybody

Should see

The Expositions.

## Go See What the World Is Doing

For Information, Rates, Train Schedules,

See Local Agent



Or Write

J. H. MANDERFIELD

A. G. P. A. Salt Lake City.

Tickets are good going or returning

VIA LOS ANGELES



For the Buyer

THE FARMERS' MARKET PLACE

This market place offers our subscribers and readers a very good place to advertise. If you have something to sell or want to buy here is the place to tell it. These advertisements are read because they offer bargains, your bargain should be here. Take advantage of this opportunity today.

For the Seller

THE GEM HERD.

Improved Chester White Swine

The Home of the Western Prize Herd  
My winnings at Idaho State Fair 1913, were 13 first, 3 seconds, champion boar and sow, and champion fat barrow  
At a Tri-County fair held at Jerome, Ida., I took all but one second. I have anything wanted in Chesters from a weaning pig to a champion boar or sow at prices all can afford. High class stock. Write me.  
For Reference—all old customers.

GEO. H. LAWSHE.

Falls City, Idaho

FOR SALE

Foundation Stock in Holstein Fresian's and Duroc Jerseys. Will exchange a few for hay or grain. For breeding and particulars write  
JOHN W. STUBBS  
R. D. No. 2. Provo, Utah.

FOR SALE

One holstein bull calf two months old, sire is a grandson of the "King Of The Pontiacs." Price \$50.  
G. A. DIXON  
Garland Utah

Percheron Stallion

An unusual opportunity to purchase a good stallion. Foaled June 1913. Utah bred. Sire imported Damocles. Very large and finely developed. Direct all inquiries to B. T., Utah Farmer, Lehi, Utah.

FOR SALE.

Small herd Registered Jersey Cattle at bargain prices.  
E. L. MORRIS  
156 12th Street  
Ogden Utah

FOR SALE

The best hog and dairy farm in Utah containing eighty acres. Also a few very choice duroc boars ready for service.  
WILLIAM MERRILL  
Richmond Utah

BUTTER WRAPPERS

We carry a large stock of the Best Vegetable Parchment Butter Wrappers and Especially Prepared Ink for Printing the same. We furnish them Postage Prepaid at the following Prices, money to accompany order.

100	\$ .90
200	\$ 1.25
500	\$ 3.00
1000	\$ 7.75

Send all orders to  
THE UTAH FARMER  
LEHI, UTAH

THE ALLIANCE INVESTMENT CO.  
SALT LAKE CITY, UTAH  
No 11 Main Street.

We buy sell and exchange farms, ranches and city property.

We buy and sell mortgages and bonds.

We write Fire, Automobile and Plate Glass, Insurance.

We will mail you a list of our exchanges free on request.

THE ALLIANCE INVESTMENT CO.  
Was. 4443 11 Main St.  
SALT LAKE CITY, UTAH

IF YOU WANT  
A BARGAIN  
"SEE ME"

160 acres near R. R. in Idaho, house, fencing, water right, part under cultivation, big snap at \$2,250.00, half cash.

160 acres South Jordan, \$20.00 per acre; terms; would take city property for equity.

100 acres Sevier Valley house, stable, sheds, first-class water right, part in alfalfa, fine for beets, grain and hay; big snap at \$4500.00—\$1500 cash, balance easy.

290-acre improved ranch, 4 miles from Richfield, independent water right, good for beets, hay, grain and stock. Horses, cattle, hogs, all machinery and most of crop go with place. Cheap at \$75.00 per acre; terms.

320-acre, extra well improved ranch in Sevier Valley, lot of registered Durham cattle, horses hogs and all wagons and implements go with place; \$33,000; terms, or take good city property.

IF YOU HAVE A BARGAIN  
"SEE ME"

GEO. W. DANLEY  
SALT LAKE CITY  
707 Walker Bank Bldg. Wasatch 2989.

Money to Loan

On improved farms with primary water rights, at reasonable rates."

INTER-MOUNTAIN LIFE  
INSURAN CO.

11th Floor Boston, Bldg.  
Salt Lake City, Utah.

FRUIT AND GARDEN  
FARM.

8 acres—part of the old Central Experimental Farm. Only ¼ mile from Lehi, Sego Lily School and Lehi 4th ward meeting house. A farm on edge of Lehi City Limits. 360 apple trees. Prunes, currants, and gooseberry trees.

CASH OR TERMS.

A. F. GAISFORD

Lehi Utah

RICHARDS' DUROC JERSEYS

WON AT UTAH STATE FAIR, 1915—Grand Champion Boar, Grand Champion Sow, Senior Champion Boar, Senior Champion Sow Eight First Prizes, Five Second Prizes, and Five Third Prizes.

RICHARDS DEFENDER, Grand Champion Boar was pronounced by many cavable judges to be the best Duroc Boar ever brought west He is 17 months old weighs over 500 pounds. The big type with quality. That's why he has so many admirers.

We purchased Junior Champion Sow and first and second prize under six months sows, so that we now have in our herd practically every first prize winner at the 1915 show.

We can make immediate deliveries of young stock, either sex, from this champion herd at reasonable prices.

Express rates on stock purchased from us is a small item as our ranch is only 135 miles north of Salt Lake City.

RICHARDS' LIVE STOCK COMPANY

VIRGINIA JESSE S: RICHARDS, Manager: IDAHO

Stockmen  
Farmers  
Buyer or Seller

Has it ocured to the number of people that can be reached thru these columns?

The field we cover. Utah and Southern Idaho, all of the territory within 300 miles of Salt Lake City. Has there ever been a better time than the present to secure business in this rich territory served by the Utah Farmer. If you have stock to sell we can help you. If you want to exchange or sell a farm here on this page is the place to tell about it. The Utah Farmer goes into more homes outside of Salt Lake City and Ogden than any other paper.

BARGAINS.

One 16-Horse Steam Tractor.  
One 20-Horse Gasoline Tractor.  
Have been used for short time, but are in first-class condition.  
Write for price and details.  
S. PETERSON & CO.,  
210 So. 6 West, Salt Lake City

We Have For Rent

well improved irrigated farm of 74 acres, near sugar factory in Utah. About half in alfalfa balance to be put in beets. Good buildings. Don't answer unless you are well equipped to handle a place of this kind.

MILLER & VIELE  
FARM LOANS  
803-7 Kearns Bldg.  
Salt Lake City

HOW TO PREPARE  
POULTRY FOR MARKET  
(Continued from page 14)

wilj not mar the appearance of another.

General Suggestions.

Never handle chickens roughly either before or after killing. Rough handling causes bruises, broken bones, scarred skins, and soft places in the flesh. Under haste on the part of the killers and pickers results in lowered keeping quality and poor appearance of the product.

Piece work which leads to quantity rather than quality makes for lower prices on the market. Those who pay by the piece should remember that they sell by the quality of the piece.

These directions will apply with equal force to turkeys intended for the holiday market.

TOIL FOR GOLD.

Did you ever think in your toil for gold  
That a dead man's hand a dollar can't hold,  
You can work and strive and scrimp and save,  
But you lose it all when you come to the grave.

Rhubarb and asparagus cannot have too much manure.



# The Perfection of Union Pacific System Service



Is not a chance---it is the result of the expenditure of millions of dollars in money and the working-out of a positive plan of betterments, which have extended over a period of many years---

As a consequence, the Union Pacific System has been brought to a state of operating regularity---the effects of which are felt through every channel of the service; the work goes on from day to day, and the public is assured of the full benefits resulting therefrom---

When you buy transportation, you buy it with the same economic conservatism you would use in purchasing government bonds or other dependable securities---

In traveling, you are entitled to stability--service, and protection, for every dollar you expend---

The Union Pacific System has been termed, "The Standard Road of the West;" it is "standard" in everything the world implies.

Six trains east daily; two trains north and northwest.



**City Ticket Office, Hotel Utah,  
Salt Lake City, Utah**



UTAH FARMER

THE

Devoted to Agriculture in the Rocky Mountain Region

OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE

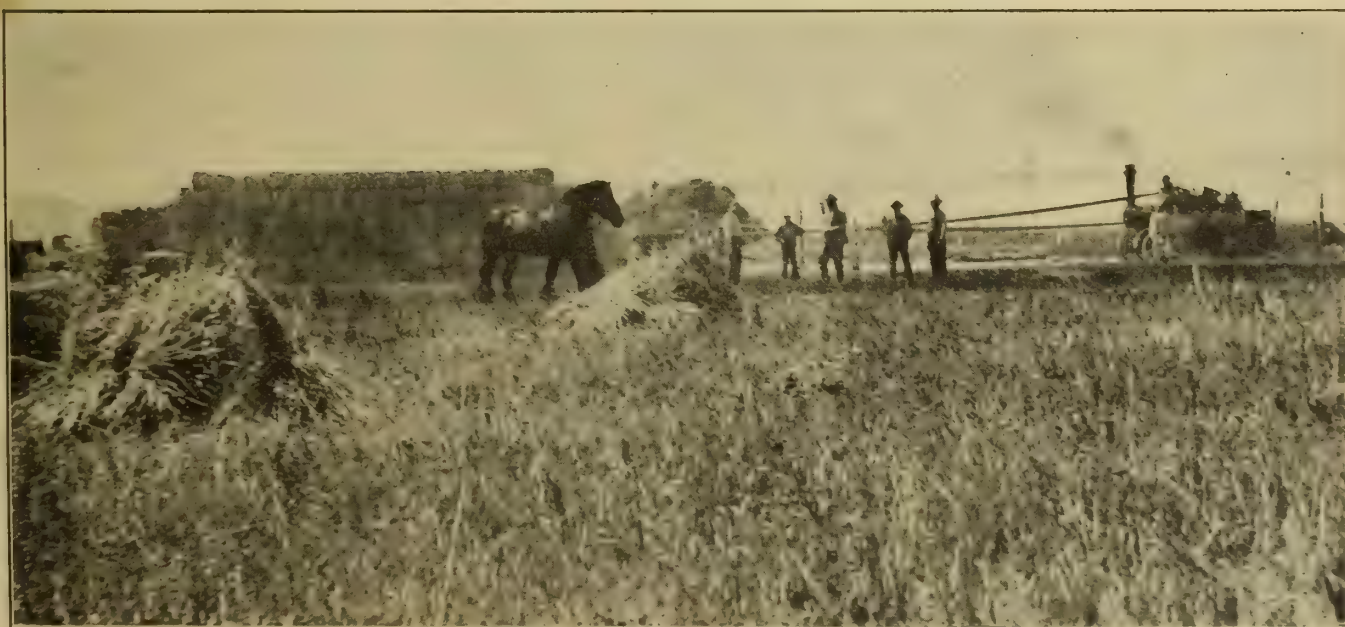
VOLUME XII; No. 18

LEHI AND SALT LAKE CITY, UTAH

DECEMBER 4, 1915



Just at the present time there seems to be considerable new interest given to dairying and the live stock business. Utah has many such farmers as shown in the picture, which bring good returns to their owners because of the live stock they produce on them.



Alfalfa is an important crop in Utah. For years we have been using it. Feeding it to all kinds of live stock with good results. In the picture is a modern baling outfit on one of our farms. Many car loads of baled alfalfa are sent out of Utah each year.



# Get Your Smiles Limbered Up

If you are going to take part in the greatest agricultural year we ever had—1916. The coming year looks good to us, as we study the many things that will help, in the production and marketing of the various crops.

DO YOU KNOW THAT there are better prospects for a good supply of water for irrigation for 1916 than there was a year ago at this time?

DO YOU KNOW THAT we should cultivate every available foot of land this coming year we possibly can, because the prospects are good for a market, at fair prices?

DO YOU KNOW THAT the best results are going to come from the land that has the best cultivation, proper irrigation, with good seed?

DO YOU KNOW THAT you should familiarize yourself with the latest and most modern ways of farming if you want to keep pace with the other fellow?

DO YOU KNOW THAT you are face to face with a number of problems on your farm that must be solved in order for you to be successful?

DO YOU KNOW THAT the Utah Farmer can help you in all this farming business, that we are spending much money and time, to print each week, the very best practical, useful and dependable information?

DO YOU KNOW THAT any subscriber can ask questions about any problems or difficulties they may have on their farm and that experts will give you an answer, and without cost.

DO YOU KNOW THAT we have some of the greatest opportunities in this state that can be found anywhere in the farming business.

DO YOU KNOW THAT we have more good things planned for the coming year for our readers than we have ever been able to give them before.

DO YOU KNOW THAT if you are behind in your subscription payment we will greatly appreciate it if you will send us a check or money order right now.

DO YOU KNOW THAT we are grateful to our many readers for their good will and support, and that we will try and repay this by giving them, the coming year, the best 52 numbers of the Utah Farmer we ever got out.



# Standardization of Wagons

By L. R. Humphreys.

It seems that the diversity of farm work today calls for a great variety in farm implements. In some instances there is some justification for this variety, but in many cases it is due to special likes and dislikes on the part of the individual farmer. This applies particularly to the wagon. The implement dealer finds it difficult to satisfy the wants of any particular section with two or three good wagons because so many farmers want a wagon just a little different from their neighbor's.

Both the implement dealer and manufacturer are anxious to please their customers and proceed to supply the goods to meet the demands. As a result, more capital is necessary with which to manufacture and keep on hand additional types of wagons and individual parts, consequently the retail price must be increased to offset this extra cost of manufacture.

This tendency has grown tremendously during the last ten years. It appears self-evident when we consider that one of the western branch implement houses at the present time is compelled to keep in stock extras for fifty some odd types of wagons in order to take care of its business successfully. Several years ago this same company could fill all the orders by having on hand extras for less than ten types of wagons.

With so many types on the market there are various widths of tires. Some sections are particularly characterized by narrow tires, others by medium widths, and still others by extra wide tires. Many farmers will haul several tons over a good road with a narrow tire. As a natural consequence the bed of the road is disturbed and cut up. The Good Roads Movement will eventually compel these farmers to gauge their load by what the wagon will haul rather than by what the team will pull.

Mr. Jones runs a wagon with narrow tires. Mr. Black would like to use a wide tire, but the extra pull encountered in following the narrow track of Mr. Jones forbids. This condition, and similar ones, accounts for such difference in wagon design in various sections.

The damage to public highways by narrow tire wagons has been very noticeable in recent years. The Legislature of Utah, realizing the condition, in its last session passed a law regulating the width of tires in wagons. This constitutes Chapter 41 of the Laws of the State of Utah, 1915, and is as follows:

**Use of Wide Tired Wagons on Public Highways.**  
An Act requiring the use of wide

tired wagons on the State Highways after the year 1920, A. D.

Be it enacted by the Legislature of the State of Utah:

Section 1: Use of Wagons with Narrow Tires Prohibited: When Proviso. It shall be unlawful after the first day of January, 1920, for any person, persons, or corporation to use on the public highways of the State of Utah, wagons having tires less three inches wide; provided that this Act shall not apply to buggies, car-



Wagon Made By Utah Agricultural College, Forging Department, Modeled After a Peter Schuttler Wagon.

riages and other light vehicles used for driving purposes only.

Section 2: Penalty: Any person, persons, or corporation using wagons on the public highways of this State, after January 1, 1920, having tires less than three inches wide shall be guilty of misdemeanor.

Approved March 15, 1915.

Can the needs of the farmer be satisfied with fewer types of wagons? This question must be answered by the farmer. As a matter of fact the farmer's condition would be much improved if he would confine his choice to three or four types of wagons. Most of the needs of the intermountain farmer can be adequately and most efficiently supplied by choosing one of four wagons.

Manufacturing companies are realizing these conditions and have felt the need of standardizing wagons. To this end, a committee has been appointed by the National Implement and Vehicle Association to investigate conditions thoroughly, taking into consideration both the needs of the farmer and the obligation of the manufacturers to the farmer. In this investigation the committee confirmed the prevailing belief of the manufacturers and found, as a result of the

use of the superfluous types, sizes and styles, that there is a waste and extravagance which must largely be paid by the farmer and yet could be overcome by standardization. Therefore, they recommend that these types be eliminated and that all manufacturers build four types of wagons, viz., light, medium, standard, and heavy. The light and medium types would take care of light traffic, while the standard and heavy would take care of the bulky work. The capacity of

39 active cow testing associations. Without question, there is a very close relation between her dairy output and the large number of different dairy organizations.

With the winter coming on, farm crops harvested, silos filled, alfalfa in stacks, many dairymen of the Northwest States are considering the purchase of high priced feeds for the dairy herd. And, as with every other purchase, comes the inevitable question, "Where can I get the best value for my money?" or to put it in the dairyman's words, "What feeds shall I buy and in what proportion shall I feed them to cause my cows to produce butter fat economically?" With this question there also arises another one. "I wonder what my cows are doing. Are they all returning the same amount of butterfat, or is one giving more than the other?" To solve these two problems, dairymen are asking for cow testing associations. Many of them realize that the question of profit and loss in the dairy herd is no small problem and that by co-operating in the formation of cow testing organizations, periodical tests and records be kept of each individual cows, which means that they will know the dollars and cents each cow returns for the high priced feeds.

On October 1, 1915, the first cow testing association in Idaho commenced active operations, having an organization of 25 members with 557 cows. Farmers and men of the West as a class are noted for their quickness to grasp a good thing and boost. The Twin Falls Tract, a barren sagebrush waste in Idaho ten years ago, brought itself before the eyes of dairymen in 1913 by sending East to the heart of Wisconsin dairy district and purchasing a train load of high grade cattle. Now they have taken one step further in advance and have organized the Buhl Pioneer Cow Testing Association. Dairymen in this district believe that elimination of the loafer cow by means of cow testing associations can be done just as well, if not better, in this district than in any state in the Union. Testing and keeping records had been tried out in a small way last year through the efforts of Field Dairyman Carl E. Johnson. The results of this work were so convincing that men on the Tract were enthusiasts over testing. So much so that in organizing the association over \$800 was subscribed in two days.

Mr. Gustave Kunze, who is President of the Association and also heads the Idaho State Dairymen's Association (Continued on page 4)

**COW TESTING ASSOCIATIONS IN THE WEST**  
W. E. Meyer, Western Office Dairy Division.

That cow testing associations pay is a well known fact among the dairymen of the East, as is demonstrated by the large number of organizations already present in the more prominent dairy states. Wisconsin, the leading dairy State of the Union, boasts of



## DAIRYING

### COW TESTING ASSOCIATIONS IN THE WEST (Continued from page 1)

ation says: "We men of Idaho must get over the idea that a cow is just a cow, for she is a machine for making butterfat. Just how good she is depends upon the butterfat she produces. We have an ideal dairy country, growing four to six tons alfalfa to the acre and 15 to 25 tons of ensilage. Dairying is our main source of income and cow testing associations are a sure way to increase the profit from our dairy herds."

Of the 557 cows in the Buhl Pioneer Association, 47 are registered Holsteins, 25 registered Jerseys, the remainder being grades, Holsteins and Jerseys predominating. 398 of these animals were milking during October and 45 of them produced over forty pounds of butterfat in the month. Alban Lottie DeKol 158215, a registered Holstein-Friesian cow owned by Mr. H. H. Stieler, heads the list with a record of 55.2 pounds of butterfat. A Jersey cow, Jinny Helena 270216, owned by Mr. Geo. A. Childs, follows a close second with 53.0 pounds of butterfat. Mr. Stieler's herd of eleven registered Holstein-Friesians averaged the highest production for the month, having 40.3 pounds of butterfat. Mr. A. Carlson's herd of registered and grade Jerseys was second in average production, having 37.6 pounds of butterfat. The following is a list of members who had cows producing over forty pounds of butterfat per month:

Name.	No. Cows.	Milk	Test.
H. H. Stieler	6	1311	46.9
Geo. Childs	1	1106	53.0
J. R. Long	2	1493	47.9
H. E. Chaffer	2	940	49.3
M. P. Dau	1	1140	49.0
C. H. Krieger	2	1317	44.8
A. Carlson	8	883	43.9
C. E. Long	2	799	45.2
H. B. Sherman	4	888	43.7
Fred Reed	2	1199	46.7
E. E. Heston	2	1153	44.8
C. H. Hempleman	1	1165	44.2
G. Kunze	5	1140	41.2
J. R. Long	1	1100	41.8
V. J. Stearns	1	1370	41.1
H. Schick	1	883	40.6
C. H. Hardesty	1	824	40.3
C. H. Wilson	1	762	40.3
W. S. Samuel	2	1235	40.5

Success in business comes to few men without the aid of some bank.

We would be glad to discuss with you the subject of co-operation.

**Walker Brothers  
Bankers**

Salt Lake City.



Washington too has started several new cow testing associations. Not only is Washington a great fruit state, but she is also fast coming to the front in the production of dairy products. The Walla Walla Valley, famous for its wonderful fruit, boasts too of many progressive dairymen. Just recently the men in this section took up the idea of a cow testing association, believing that the successful co-operation they use in the production of fruit could just as well be applied to the production of dairy products. Their association commenced operation November 1st. Many of the farmers here have taken up dairying just recently and are of the opinion that a cow testing association will be of much help in placing the foundation stock of their herds on a record basis.

County Agriculturist Patton of Walla Walla, who is one of the most practical men in his work in the Northwest and has a varied field of agriculture, says: "A cow testing association will undoubtedly be of much benefit to the Walla Walla Valley. We have fair dairy stock, but I look forward to the association being a means of causing Walla Walla County to be on the lookout for dairy cattle with records. The tester too will be of much assistance to me. County agriculturists can make very good use of the work done through a cow testing association. There is no surer and safer means of increasing the quality of the stock in any community."

The Enumclaw Association, which was organized in 1909, again assumed active operations on the 8th of November, this year. Former President Otto Tamm, in speaking of the work of the old association, says: "I believe we made a mistake in organizing our association on a dollar basis, and as a consequence we have revived the work on a dollar and a half per cow basis. We have excellent market facilities here, selling our milk and cream to Seattle for human consumption on the butterfat basis. We are putting out such a high class product that we receive considerable above Elgin prices during the entire year. We have now only to increase the product of each cow. Our first trial with a cow testing association in 1909 proved to us the benefits of this work, and we hope under the new plan to keep our association on a permanent basis. As proof of the fact that our dairy products are of exceptional quality, I am glad to say that Mr. P. O. Ekman, a member of our cow testing association, won the gold medal at the San Francisco Exposition in the market cream class, his exhibit having a score of 96.5. Our creamery was also awarded the gold medal in the cream dealers class, the average of ten samples having a score of 93."

Farmers in this vicinity depend upon the cows as the means of support. The rainfall is so abundant here that forage crops rarely ripen and are usually ensiled. Silos are a necessity. We find alfalfa silage, corn silage, and oat silage. In fact, all forage is ensiled. Root crops are a success here. Many farmers raise 40 tons to the acre. Roots and ensilage, together with purchased mill feeds, form the



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general dairy rations. Grain is not successfully grown, with the consequent necessity of purchasing concentrates.

Montesano, a district twenty miles from the Pacific Coast, has just completed a cow testing association. The Montesano Commercial Club furnished a testing outfit free to the association. The Montesano Mayor, a booster for better agriculture, has donated a horse to be used as a means of transportation for the tester.

Of the Northwest States, Oregon has the most cow testing associations, having 14 in active operation. Washington has 5 organizations, Utah 1, Idaho 1 and Nevada 1.

To aid in the organization of cow testing and bull associations, the Western Office of the Dairy Division of the United States Department of Agriculture has placed a man in the field who devotes his entire time to this work. Keeping a staff of specialists to cooperate with the County Agriculturists has proven advantageous in obtaining results for better dairying. The County Agriculturists of the West have a great variation in farming and the aid of men who make a specialty of one

phase of agricultural work means much to them. It is the policy of the Western Office of the Dairy Division to co-operate very closely with them, for in this manner the work of developing the Western Country in good dairy farming can be accomplished much more rapidly. By the aid of the County Agent, work started in any territory will remain on a more permanent and sound foundation.

### CARING FOR THE DAIRY CALF.

There are a great many farmers who pay little attention to proper methods of raising the dairy calf, thinking it seems, that a calf if of good blood, will develop into a good cow. Others hold that the work necessary for proper care of a calf is too much, and consequently search the neighborhood over for mature cows.

If a farmer is looking into the future he should indeed be planning for a better producing herd. Even though he obtains this end by purchasing from other dairymen he must remember that they will demand a high price. Usually it is impossible to buy superior stuff and thus the herd is in no way improved. The wise





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dairyman selects out the heifers from his best producing cows and cares for them himself, thus ensuring a profitable herd in the future.

There are a few principles in raising the dairy calf, if followed, are very sure to bring good results. The University of Nebraska in their recent Bulletin on 'Raising the Dairy Calf,' give in a very satisfactory way some of these principles.

### Feeding.

Results from skim milk are just as satisfactory as those where the calf is fed on whole milk or even allowed to run with the dam. Altho the calf receiving the whole milk may appear somewhat more plump and smooth, yet the necessary food for growth is present in the skim milk. Fat is the only substance eliminated. Protein, the constituent most necessary for muscular growth and proper development of the vital organs is equally abundant.

Whether the calf is taken from the cow at birth or several days after it should receive the first milk of the mother. This stimulates the digestive tract to action. The calf can be learned to drink easiest if immediately taken from the dam. If it refuses to drink it will be found a good plan to withhold feed for 24 to 36 hours.

Four to five quarts is sufficient to feed a young calf or if it shows symptoms of weakness diminish the amount. Do not attempt to put a calf on skim milk diet for 2 or 3 weeks and then make a change of milk gradual.

An increasing amount of milk should be added until at the age of 5 months it is receiving from eight to ten quarts.

At the age of two or three weeks the calf will begin to eat a little grain. If some is placed in its mouth after it has finished drinking it will soon learn to eat it.

The grain should be fed dry as it will be chewed before it is swallowed. Ground corn and crushed oats have been found satisfactory.

It should also be furnished with some good hay, although fresh alfalfa should be fed sparingly as the calf might gorge itself and cause serious trouble. Silage if available can be fed in small amount although it is a good plan to feed but little of the grain with it. Water and salt should be constantly before the calf.

At six months the calf may be weaned although there is no harm in continuing the milk diet if sufficient milk is available.

### Scours.

Possibly the most serious difficulty encountered in calf raising is the trouble known as scours. Probably the most frequent cause of this is overfeeding, overloading the calf's stomach at each meal is very apt to lead to serious trouble. The calf should appear hungry after it has taken all that is offered.

It is a good plan to actually weigh the milk at least sufficiently often, for precaution against overfeeding. The milk should also be fed while sweet. Sour milk sometimes gives good results but the practice is dangerous. It should be about blood heat 95-100 degrees F., otherwise chilling is apt to result.

Scours are of 2 kinds, white scours and scours from ingestion.

### White Scours.

This is infections. The germ of this disease enters the blood of the calf

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through the naval cord. This is soon after birth and generally in a few days the calf takes the disease which usually proves fatal. If the disease has occurred on the farm before, sanitary precautions should be taken. The naval cord and belly of the freshly born calf should be disinfected with a 3 per cent solution of creolin or carbolic acid and then bound up. This treatment should be repeated several times at intervals of two or three days.

### Scours from Ingestion.

This is caused by the inflammation of the stomach. As above stated scours often result from overfeeding, thus being the kind that result. Immediately, upon the observation of the symptoms, the ration should be cut down one-half and sometimes all should be withheld for several feedings until the calf appears normal. Sometimes two or three ounces of castor oil can be added to the milk with good results.

### Dehorning.

The calf should be dehorned when young. A very satisfactory way is to purchase some caustic potash from the drug store and rub this on the budding horn spot until a small sore is produced. By cutting away the hair and partially cutting the skin this can be accomplished quickest. The caustic potash is in sticks. These should be kept in an air tight vessel else they will absorb the moisture of the air and spoil. After the treatment care should be taken to keep the calf from rain or some of the treatment might be washed down in the eyes.

### Time for Calf to Come.

It is generally supposed that the calf will do better if it is dropped in the spring. Experiments fail to indicate such an advantage if it is properly cared for during the winter and

on the other hand the mother if fresh in the fall will have the green feed to aid her milk flow during the latter part of her season.

### Breeding.

The age at which the heifer is bred depends largely on the size and breed of animal. Usually the Jersey or Guernsey heifer should be from 13 to 17 months while the Holstein should be from 17 to 21 months.

### Young Bull.

Although nothing has been said of the young bull yet the general principles followed for the care of the heifer are satisfactory. A little more feed should be offered due to the larger size of the bull.

He should be ready for light service at from 10 to 12 months. Possibly one cow every three weeks would not be too much at the age of sixteen months about one cow per week would be safe.

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## Field and Farm

### THE USE OF MANURES.

Agricultural Lesson XV.

By Prof. J. C. Hogenson.

Manures have been used for the improvement of soils since time immemorial. In Europe and the older settled northern regions of the United States it is extensively used today, while the chemical fertilizers are largely used in the South. Stable manure is the best fertilizer used as it not only adds available plant food, but also improves the physical condition of the soil and thus renders more of the food already in the soil available.

Manure may be defined as any substance which applied to the soil will increase its productiveness. Any substance which adds to the soil any of the elements of plant food is a direct manure. Some substances contain none of the elements of plant food, yet when added to the soil they increase its productiveness. These are called indirect manures. Lime is an indirect manure.

The word manure in American usage is often understood to designate only some form of animal excrement. This is not correct. The word in the broadest sense includes not only animal excrement, but also such substances as peat muck, leaf mold, and all the various substances bought and sold under the name of fertilizers. The word fertilizer in American usage designates any of the substances other than animal excrement that are largely bought and sold.

Farm manures are divided into 1st the Excrements of barnyard manure, is a composite mixture of the excrements of the various domestic animals accumulated on a farm. In American usage it designates the manure from cattle as Stable Manure, that from horses as dung and urine. The dung consist chiefly of the indigested portions of the food. It contains approximately one-third of the total nitrogen, one-fifth of the total potash, and nearly all of the phosphoric acid excreted by the animal. The urine of our domestic animals contains compounds produced as the result of changes which go on in the body in the digested portion of the food and in the tissues of the body itself. The urine usually contains about two-thirds of the total nitrogen, four-fifths of the total potash excreted by the animal. The total weight of urine excreted by the animal is about twice that of dung, hence we see the importance of having conditions which will prevent the loss of the liquid manure. Manure should not be exposed to rain which causes a loss of nitrogen and potash.

#### Green Manures.

Green manure is the name given to the practice of growing on the land a crop which is produced for the purpose of improving its condition. Such a crop may be either left on the surface or plowed under. Green manure may be beneficial in the following ways:

- 1st. Increases the availability of the mineral elements of plant food.
- 2nd. Increases the store of humus and thus warms the soil.
- 3rd. It saves nitrogen which would otherwise be lost.

4th. It increases the stock of nitrogen in the soil.

5th. It brings soluble food from the subsoil to the surface where later crops may feed upon it.

6th. It opens and mellows the soil.

7th. It makes following crops deeper rooted.

8th. It helps to free the land from weeds.

9th. It prevents injury from washing or from winds.

#### Chemicals Used as Fertilizers.

The elements commonly regarded as necessary in fertilizers are nitrogen, potash, and phosphorus. Those elements questionably needed are calcium, magnesium, sodium, and sulphuric acid. Commercial fertilizers are used mostly in that portion of the country where there is but little manure produced, and where it is desired to add something to the soil to increase its fertility, and which will become immediately available to plants. Where fertilizers are used from year to year with no organic manures, although they increase the crop yield by adding plant food, the soil becomes hard and in a poor physical condition.

Most of the fertilizers are found in nature in a somewhat concentrated form and are simply prepared by man in such a way that they can be most conveniently and economically used. A small per cent of nitrogen from the air becomes fixed in the soil from electrical discharges. About five pounds per acre is also carried from the air into the soil as ammonia and nitric acid in rain water.

In the natural combustion nitrogen compounds are also set free. Bacteria also tend to fix the nitrogen in its soil, especially those thriving upon the roots of legumes. These are parasites and derive their nourishment from the plant, but it in time supplies the plant with nitrogen. They are distributed nearly all over the world. There appears to be a special variety growing upon the root of each variety of legume. For their development they require from 50 to 70 degrees F. of heat, an abundance of oxygen, and some moisture. They can be made to develop in solution if given food. Into one gallon of water dissolve three spoonfuls of sugar and 72 grams of potassium phosphate and three grams of magnesium sulphate. Add the cultures and keep in a warm place. After 24 hours add 6 ounces of ammonium phosphate and allow to stand for another 24 hours. The liquid should now be cloudy and is ready for use. This solution may now be sprinkled over the seed or mixed with a portion of earth and this sown on ground where no nodule forming bacteria is known to exist. This will cause them to develop there. Soil may also be taken from a field where these organisms are known to exist and this scattered over the land which will insure their presence.

1. Commercial Fertilizer supplies plant food only.
2. Barnyard manure—Supplies plant food. Improves physical condition. Provides heat (Indirectly) starts chemical action and sets free soluble food.
1. Foliage producing plants require Nitrogen.
2. Seed producing plants require



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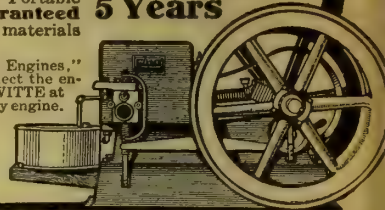
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4. Sheep manure is concentrated, rich, quick in action.
5. Hen manure is richest in plant food, quickest in action.



**WEEDS HARBOR INSECTS.**

Getting rid of grass, weeds, and undergrowth about the farm during the fall and early winter is one of the best protective measures the farmer can use against crop-damaging insects the following year. Weeds, matted grass, dead vegetation and brambles along fences, roadsides, margins of fields, banks of little streams or ditches, especially in irrigated territories, are the natural hibernating and often breeding places of many destructive insects. This vegetation gives grasshoppers, chinch bugs and other insects most favorable conditions for reappearance the following spring and summer. Grasshoppers lay millions of eggs along the banks of canals and ditches in the western country. Many destructive pests could not endure the winter were it not for these natural nurseries.

The entomologists therefore recommend to farmers that they fall-plow sod lands intended for other than grass crops another year, and clear up roadsides, fence margins and all waste lands, ditch banks and similar places by burning over, pasturing, or in case of ditch banks, by plowing or disking in the fall. This will tear up the roots and expose the eggs of grasshoppers to the excessive moisture and cold of winter and will also turn up those insects which hibernate in the ground. Burning vegetation where possible will destroy many insects, though, in the case of grasshoppers, it probably will not be as effective as cultural methods. In addition, cultural methods by turning humus into the soil benefit the land.

Sheep, of course, are the great

enemies of weeds and where sheep can be turned into a field, or a flock herded along the roadside, they will effectively clear up waste vegetation and in addition the trampling of their feet will destroy many insects. The sheep at the same time turn waste material into mutton and all they require is a little grain for finishing. Frequently when sold they return a profit, but the entomologists hold that even if they merely pay for the extra grain they eat their function is destroying weeds and keeping down insects makes their use well worth while.

In many places community action in destroying weeds is necessary, as it may not be profitable for the farmer to clear his side of the road if the other side is allowed to remain a harboring place for pests. In such cases it might well pay the community to get sheep co-operatively and use them to clean up the weeds of the entire section.

**FARM BUILDINGS.**

Sanitary features should be kept in mind when the hoghouse is planned. The building should preferably have a frontage on the south. An entire row of windows should be provided for the admittance of sunlight. For stalls should be planned so the work of feeding and bedding the brood sows and pigs can be done easily and without loss of time. The house should be high enough at all points so a man can walk without stooping. When the farmer is obliged to bend half over while he cleans out the stalls, or feeds the hogs, he is apt to lose interest in the work. The

foundation of the hoghouse should extend not less than ten inches under ground, and not less than six inches above the surface. A concrete foundation, will exclude all surface drainage.

The granary for wheat, oats or shelled corn must be water tight. If rain water drives in at any point the tightly packed grain will heat. Brace the building well; for shelled corn or thrashed wheat has considerable weight per cubic foot. The general idea should be to make the building vermin proof. When rats and mice gain access to the grain they cause much waste. A grain bin may be made perfectly vermin proof by lining the interior with tin. Plenty of trap doors should be provided in the granary wall so the grain may be scooped in without inconvenience. The cribs and granaries on the farm should be erected over well-constructed foundation.

The machine shed should be constructed so there will be an abundance of storage room for the various wagons and farm implements kept upon the place. Often the carriage and buggy houses are included in the machine shed. The machine shed is inexpensive considering the great service it renders the property owner. Separate divisions should be provided for the wagon, manure spreader and buggies. The binder should have its place. The majority of the smaller pieces of machinery can be stored in one compartment. It is advisable to enclose the machinery shed all around; when one side is left open, driving rains may dampen all the

articles stored away. The shed for machinery should be located where it may be gotten at handily. When not in use binders, manures spreaders, etc., should always be kept in their places. The shed for machinery will eventually pay for itself by protecting the high priced farm equipment from the ravages of the elements.

**POWER DRAINAGE MACHINES.**

Power machinery is now available which will excavate drainage ditches of all sizes and under all conditions of soil and water more cheaply than can be done by any other method, according to a recent bulletin of the department. Responsibility for carrying on the work on community drainage projects in agricultural districts frequently rests upon persons with little practical knowledge of the methods and cost of operation of such machinery or constructing drainage ditches on a large scale. To supply information on the use of power machinery in such work, a professional paper of the Department Bulletin series has been published.

Many of the details of construction, first costs, and method and cost of operation are given of several types of dredges and excavators, viz, floating dipper, floating grab bucket and hydraulic dredges, and drag-line, dry-land, dry-land grab-bucket, templet, and wheel-type excavators. Mention is also made of machines for cleaning old ditches.

The Bulletin No. 300, Excavating Machinery Used in Land Drainage, may be had upon application to the Editor and Chief, Division of Publications, as long as the supply for free distribution lasts.

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China has undertaken to train her farmers. Extension work under the direction of the government has commenced with an American agriculturist in charge. They will have a school to train these lecturers and they in turn will travel all over the country introducing improved methods of farming.

"Rome died in the pomp and grandeur of her marble halls because she crushed the mud house of the small land-owning farmer. She made his markets poor and his capital hard to get. The same thing is happening in the United States today. Therefore a real market and rural credit plan is vital to the life of the nation."—David Lubin.

Fall plowing continues in many places. The land that is plowed up and allowed to freeze, if properly worked in the spring, will make a good seed bed. In many ways it helps the land if plowed in the fall. Do all the plowing and just as deep as you can, before the hard freezing weather comes.

#### OF COURSE BUSINESS IS GOOD

The press dispatches of the week have been reviewing conditions all over the United States and they say that "prosperity is country wide." Conditions have improved. We are beginning to get returns from the bumper crops of all kinds. Some have been saying a poor business so long that they can not think any thing else. The Federal Reserve Agent of the government find conditions better in every section. With labor generally well employed and an increase demand for manufactured goods, an optimistic spirit seems to prevail. A few people are complaining but the general sentiment is that "business is good."

#### COW TESTING.

There is only one way to "know" what a cow is producing and that way is to keep a record and test—you can not do it by guessing. You learn the value of a cow when you know what she is producing. You learn the cost of production when you have a record. With a knowledge of conditions, certain facts are brought out and then you can study how to reduce cost, for it does not pay to feed and care for cows that do not make a profit for you.

A merchant would not handle any line of goods very long if it did not pay him to do it. Why should a farmer feed a cow that does not produce enough to pay for food and care? Treat a cow as a machine if it does not produce results get rid of it. The way to find out if "old Boss" is making good is to "test" her. This work can best be done in a cow testing association. You can however do it yourself if you will keep the records and will use a Babcock tester.

#### OUR JUVENILE COURT AND ITS LAWS.

In Utah we differ from nearly every other state in the Union in this one respect, that the farmers of the state, nearly all of them, live in the smaller towns and in most instances take an active part in the affairs of the city or town.

In the near future there is to meet at Provo representatives of all the cities and towns of the state to discuss a number of problems that we are all vitally interested in, one that we think should be emphasized and which they are going to discuss is the question of our Juvenile Court and the enforcement of the Juvenile laws. This is an important question in Utah at the present time for we do not all seem to agree on the question. Some people criticize the laws, others the officers because they do not enforce the law. We are interested in the boys and girls of this state and would like to do any thing that will help them. We hope that after these city officers have met and discussed these questions they will do more—that they will act—and for the good of all concerned.

#### WINTER CARE OF STALLIONS.

Probably more stallions are mistreated during the winter than during any other season of the year. Many men seem to feel that the stallion,

after the breeding season can be carefully stowed away until he is required for next season's breeding. The life and usefulness of stallions can be much extended if they are given proper winter care. The horse should have sufficient nutritious feed to keep him in good condition. Usually only a small allowance of grain will be required provided good alfalfa hay is available. One of the things which is most necessary is exercise and association with other horses. If it is possible to work the stallion, so much the better, otherwise give him the run of a paddock where he can see other horses and in which some shelter is provided. For a ton horse the ration may consist of about 20 pounds of alfalfa hay and from 6 to 10 pounds of oats or a mixture of oats and bran will be found sufficient.

#### BETTER SANITARY CONDITIONS.

A good many people in this state have demonstrated what can be done in the way of improved sanitary conditions. "Never in the history of our state has the corrals been in such good conditions as they are at the present time," according to Dr. Beatty, secretary of the State Board of Health. As a result of better sanitary conditions there is a great reduction in the number of flies. Many communities are to be commended for the amount of paint they have used, in brightening up their home, barns, fences and buildings. Why not make our state a leader in these improvements, better health and beautiful home surroundings. There must be a community pride in doing this, with an organization of all interested to accomplish the best results. If people would be clean and stay clean it must be because of the love of cleanliness. Better sanitary conditions will make for better health and this we should all work for, not only on the farm and around our home, but as a community for the good of all. Utah is known for its leadership in many ways, lets us show every one what we can do along these lines of work.

#### THE FARMERS' STATIONERY.

When a farmer writes a letter, he is largely judged by the kind of a letter he writes. This is particularly true of the kind of writing material used. When a letter is received written on a nicely printed letter head, good quality of paper, with a pleasing design, it gives that man a favorable introduction to the one with whom he corresponds. The first impression one makes is usually the one that lasts. A well printed letter head, nicely gotten up with a small design or a picture of the farm is bound to attract attention. If you are breeder of pure-bred cattle have a picture of your favorite animal or group of good animals but do not have the cut made too large. If you are in the poultry business a cut of a chicken is suggested. Others can make illustrations to suit their business.

In writing a business letter, it should be made to say just what is needed and nothing more. You should however always give enough details so that guessing is not necessary, in order to understand just what you wanted to make known.

Have your letter heads printed showing the name of the farm, your own name and address, and such other advertising matter as you may deem of value. Take pride in your business and let your letters give you all the favorable publicity possible. Such advertising is cheap and, so far as it goes, very effective.



## LIVE STOCK

### PARASITES AND HOG CHOLERA.

In a recent publication of the Breeders Gazette it was pointed out that hogs infested with worms and lice are less resistant to cholera than those free from such parasites.

It is often true that hogs so infested are living under conditions not the most sanitary and consequently the filth with which they are forced to live adds to the danger of the disease. But even when serum is used it appears to prove fatal in a greater percentage of cases and proves unsatisfactory in an even greater degree.

Not only are worms in the hog undesirable from the standpoint of decreased vitality on the part of the animal, but they are very undesirable from the standpoint of the consumer. Some of these worms imbed themselves in the flesh of the hog and then if the flesh be taken into the human body without having first been thoroughly cooked the worms may infest the body of the person. In either case it is highly important that the hog be kept free from the parasite.

It is much easier to accomplish this before the hog is infested than to attempt to eradicate the worm after it once has entered the body. In most cases worms of hogs do not pass their entire life cycle in the body of the animal but oftentimes remain outside in an encysted form awaiting an opportunity for entrance. They oftentimes inhabit utter, manure and rubbage around the yards. If their presence is suspected the addition of quicklime in the hog yards is a good method. The water supply should also be made clean and sani-

tary as infection may occur in this manner. If the hogs are infested a mixture of equal parts of common salt, sulphur, hypesulphate of soda, sal soda, glaubers salts and iron sulphate, and a double portion of wood charcoal is a good laxative tonic. At the same time is quite effective in riding the animal of these parasites. Plenty of quicklime should be kept in the hog pen to ensure safely against the worms that might be passed by the animal.

The above mixture is relished by the hog and can be kept in a trough where the animal can run at it at will.

The herd that is free from lice is likewise less apt to contract cholera.

Kerosene emulsion is an effective destroyer of this parasite.

The following method of preparation is recommended: Dissolve ½ lb. of hard soap in one gallon of hot water. When the soap is completely dissolved remove the vessel from the fire, let it cool, and add 2 gallons of kerosene. The kerosene is added little by little and the mixture stirred vigorously. A spray pump can be used to good advantage for this purpose.

For use in killing lice on hogs, dilute the above with fifteen to twenty volumes of water and apply with a spray. If the hogs are all retained in a pen they will rub against one another and aid in getting the emulsion all over the body.

It is a good plan to gather up old straw and litter around the pen and burn it as this might contain a few individual lice.

### LIFE'S MIRROR.

There are loyal hearts, there are spirits brave,

There are souls that are pure and true;

Then give to the world the best you have

And the best will come back to you.

Give love, and love to your life will flow,

A strength in your utmost need:

Have faith and a score of hearts will show

Their faith in your word and deed.

Give truth and your gift will be paid in kind

And honor will honor meet:

And a smile that is sweet will surely find

A smile that is just as sweet.

For life is the mirror of king and slave 'Tis just what we are and do.

Then give to the world the best you have

And the best will come back to you.

—Madeline S. Bridges.

### MEASURE OF FARM EFFICIENCY.

There are certain factors on which the success of farm business usually depends. From these it is usually possible to determine not only the good points in a system of farming but also its deficiencies. The latter being known, the method of improving the system becomes evident.

On a great majority of farms, suc-

cess is primarily dependent on three important factors. These are (1) the size of the farm business; (2) the yields of the crops and the returns per animal, representing the quality of the farm business; and (3) the diversity of the business. Of course many other things have their influence

but the farmer whose business is efficient in these three respects is generally successful. Those farms that are excellent in none of these respects almost universally fail. Those deficient in one or two may succeed, but their chances of success are greatly lessened.

"Utah's Most Popular Music House"



"Press the button---  
Out comes the  
Record you want"

The "LEADER" model Columbia Grafonola is equipped with an Individual Record Ejector Cabinet which protects the records when not in use.

TONE is the secret of the ever-increasing popularity of the Columbia "LEADER" Model GRAFONOLA.

Every famous singer in the world can be heard upon this wonderful instrument, and each one's voice comes forth to you in all its original purity and sweetness. And you can also get the world's best music in operatic, orchestral and band selections. It's just like bringing the famous singers, bands and orchestras right into your home—not only for one evening—but any time and as often as you want.

Price of the "LEADER" is.....\$85.00  
12 double-disc Records..... 7.80

Freight prepaid to your R. R. Station.

YOU DON'T HAVE TO PAY ALL CASH.

A small payment at time of purchase and balance in payments arranged to suit your convenience. It's the best investment you could make. It will bring happiness supreme into your home.

FILL OUT THE COUPON—GET A BEAUTIFUL CALENDAR FREE.

Daynes-Beebe Music Co., Salt Lake City, Utah.

Please send me FREE Catalog of Grafonola and Records and enter my name for beautiful FREE 1916 Calendar.

Name..... Address.....

*Daynes-Beebe Music Co.*  
ESTABLISHED 1860  
45 MAIN ST. SALT LAKE CITY, UTAH.  
"OLDER THAN THE STATE OF UTAH"

## Reliable Farm Bargains

215 acres, one mile from railroad station and beet dump. Full water right in the Bear River Canal for 50 acres. Balance first class dry farm. Good house, sheds, etc. Hog pasture and 1000 head of hogs on the place at present. A great bargain at \$50 per acre. Will take some property as part payment. Balance on good terms.

80 acres near Elwood station. Has been in alfalfa for 8 years. Owner is offered \$16 per acre cash rent per year. Will sell for \$130 per acre on good terms. Full water right. A very splendid buy for a man who wants an income producing farm.

40 acres, near Tremonton. Full water right, land is leveled, plowed and in perfect condition. Only \$115 per acre on ten years time.

2½ acres on 15th South and 4th East.

First class land and good water right. Only \$900 on very good terms. Only \$90 cash down.

6½ acres near 15th South and 3rd East. With a good substantial 7-room house, 2 large chicken houses, good place for chickens and geese. Five flowing wells on the property. Shade trees and fruit trees. Only \$3100. One-tenth down and balance on ten annual installments.

We trade farms for city homes.

Phone—Wasatch 963

**Kimball & Richards**

"Land Merchants"

56 and 58 Main Street  
Salt Lake City, Utah.



## THE HOME

### HOME ECONOMICS

#### ASSOCIATIONS PROGRAM

##### Suggestions for January Meetings.

Papers—The New Year's Customs When I was a Child. Things a Man Might do for the Home During the Winter Months.

Entertainment—A New Year's Social. A Basket Social. The Association members prepare a lunch for two. The men are invited and each purchase a lunch, sharing it with the owner. The charge may be either a fixed one, or the purchaser may give what he pleases.

Roll Calls—A Housewife's Resolution for the New Year, by the members.

Demonstration—Cakes for Children's Parties. Best Methods of Cooking a Roundsteak.

##### Notes from Associations.

The following interesting report was received from Tremonton. "We are working on our library, getting things worked up for a Carnegie if possible. Have written to Miss Downey, State Librarian, Salt Lake City, and she will speak to us some time in November. We have turned the social meeting over to make money for our library. We hold a bazar this month. We are gaining new members right along, and the interest keeps up very well considering the busy times for farmers' wives."

Cornish reports an Association alive and working. Their programs consist of some good talks and demonstrations.

Moab is to have a town cleanup and is going to work in a very systematic manner, holding public meetings and enlisting the aid of both the young people and other members of the community.

Bluff is one of the new Associations, and being a very small town has few members, but expects to enjoy the work and reap great benefit therefrom.

Fillmore has an enrollment of 34 and reports that they expect a much larger one next meeting, after canvassing the town.

##### The Housekeepers' Conference.

The keynote of the Housekeepers' Conference this year is to be that of health, how to obtain and how to hold it. This will be taken up under the following subjects: Personal Hygiene, which will include Care of the Hair, with demonstrations in hair dressing; Care of the Feet and what their covering should be. Bathing, and other matters of personal cleanliness.

Home Sanitation. The general care of the house, general care of the home and what should be the ideal for its surroundings. The Best Equipment for keeping the home clean, with the least amount of labor.

Civic Cleanliness. Community co-operation in the matter of clean towns, community laundries, with the idea of making the home town a good place to live in, will be especially dealt with under this head.

Conservation of Health. Physical Culture lectures and exhibitions will be made a specialty in this part of the program. The conservation of energy, possibilities of recreation for older people, and talks upon how to get

the greatest happiness through repose and absence of worry, will be given by those able to speak from experience.

In addition to the above, demonstrations in the preparation of food, both from the standpoint of nutrition and cleanliness, will be given by experts. It is impossible at this writing to say who the speakers and demonstrators will be, but we ask the members of the Associations to watch for the next Leaflet which will give an official program. We hope to make this one of the best conferences ever given to the women of Utah. We do not expect to have so many speakers at one session, but desire rather to give more time for discussion on the part of those present.

##### The States Relations Service.

It is well at this time that the women of the State should know something of the practical things that are being done for their assistance by the United States government in its new department. The office of Home Economics which has as its head Dr. C. F. Langworthy, is making many interesting demonstrations in regard to the energy output required for certain kinds of work. The washing of dishes under varying conditions such as sinks too high or too low, sitting as compared with standing, ironing as compared with sewing, have been tested. It is interesting to note that there is very little difference between the energy required when ironing or sewing, provided the former is done in a sitting position. Housewives interested in raising chickens with the incubator will be glad to know that tests are being made to find out the changes in eggs during incubation, so as to prevent losses under this process. Jelly making, various combinations of fruits, are being tested with a view to standardization of product. Bulletins on all these subjects will be published when the tests are completed. A visit to the Office of Good Roads and Rural Architecture showed that they are at work upon the special problem of providing better planned farm homes. The Director of this Office promised that should any of our women desire assistance in making a plan, they may receive it upon the following conditions—that they send information as to the size of home wanted, whether one or two story, the surroundings, the frontage, and if desired a rough sketch. A plan will then be drawn up suited to the community for which it is made. Such requests should be sent in to the Extension Division of the College and will be forwarded.

The executive office of the service is headed by Mr. C. B. Smith. Mr. Smith is most anxious to aid the women in every possible way and greatly desires that the Home Demonstration work shall be a success in this State.

##### Soups Suitable for the Main Part of a Meal.

Bean Soup.  
Pea Soup.  
Split Pea Soup.  
Vegetable Soup.  
Cream of Cheese Soup.  
Cream of Cheese and Tomato Soup.



Buy boots that won't leak, peel, crack or split apart!

## Goodrich "HIPRESS"

THE ORIGINAL

### Brown Rubber Boots and Shoes

"With the Red-Line 'round the Top"

Made of the same, tough, wear-resisting rubber that's used in Goodrich Tires—by the famous Goodrich "HIPRESS" process—the new method, originated, perfected, and used only by Goodrich—that welds fabric and rubber under enormous pressure into one solid piece that stays together.

Goodrich "HIPRESS" footwear fits your feet while you're working—because it's shaped to the foot.

"HIPRESS" boots and shoes outwear leather—and they never need half-sooling!

Sold and recommended by over 27,000 dealers. Do not be misled by color imitations. The genuine "HIPRESS" has the "Red-Line" 'round the top.

Dealer: If not stocked, write for samples and prices. This line sells fast.

### THE B. F. GOODRICH COMPANY

"Best in the Long Run"

World's Largest Rubber Factory. AKRON, OHIO

Cream of Peanut Soup.  
Potato Soup.  
Milk Potato Soup.  
Barley Broth.  
Corn Chowder.  
Cream of Corn Soup.  
French Vegetable Soup.

##### RECIPES.

##### Cream of Cheese Soup.

One qt. of white sauce No. 1, 1½ cup grated cheese, seasoning to taste, one small onion. Fry the onion in butter, add it to the white sauce, add cheese, removing sauce from fire and letting it melt.

##### Peanut Soup.

1 pint of stock, 1 pint of white sauce, ½ cup grated peanuts, add to stock and sauce after combining.

##### French Vegetable Soup.

6 medium sized potatoes pared and sliced. Cover with water, add ½ cup rice, let cook until tender, add one cup of tomato juice and pulp, one egg, slightly beaten, and one cup of milk.

##### CHICKEN JELLY.

Cook a chicken in water enough to little more than cover it; let it stew gently until the meat drops from the bones and the broth is reduced to about a pint; season it to taste with a little pepper and salt. Strain and press, first through a colander and then through a coarse cloth. Set it over the fire again and cook a few minutes longer, add the meat which should be picked to pieces, then turn into an earthen vegetable dish to

harden, and as soon as cold set it on the ice in the ice box. Eat cold in slices; it is nice for sandwiches with thin slices of bread lightly spread with butter.

##### HOW TO REMOVE STAINS, METHODS ARE SHOWN

It is, as a rule, very much easier to remove stains from washable than from non-washable materials. With the lather it is always well to keep the spot confined to as small a space as possible, to rub as gently as possible, and with the threads of the material, not in a circle. To prevent a ring on silk or wool, first make a ring of cornstarch or talcum or flour just outside the stain, then apply what is needed to take out the stain. The ring of talcum or cornstarch will absorb the cleaning agent so that the ring will be very indistinct as compared to what it would have been if this precaution had not been taken.

To remove blood and fruit stains moisten carefully with warm water, then absorb the stain with cornstarch or cornmeal or talcum. If a ring appears, the whole garment may need sponging and pressing.

Milk or cream.—Gasoline or chloroform dabbed on carefully with cotton, then warm water if not entirely removed.

Grass, pain, and varnish.—Use alcohol for the first, and turpentine or alcohol for the last two.

Perspiration.—Ammonia applied gently with a bit of cotton is effective.







## ORCHARD AND GARDEN

### AUTUMN ORCHARD WORK.

In the management of the orchard, especially the apple and pear orchard, there is a period in the autumn after the fruit is gathered, and perhaps after other crops have been safely harvested, that is most convenient for doing some of the careful work in the control of certain diseases and pests. The control of peach borers and insect pests and fall spraying for San Jose scale have been discussed in a previous article. There are certain fungous and bacterial diseases, particularly pear blight and apple canker, which are best worked upon at this time. These diseases are principally controlled by the eradication methods rather than by spraying. With both these diseases it is not only a matter of convenience but it is a fortunate thing that some of the most important work of the season can be best accomplished at the time when it is most convenient. The mild autumn days before the snow flies or disagreeable, rainy, or cold weather comes give the very best opportunity for careful work and close inspection.

#### Pear Blight.

Pear blight is a bacterial disease which works mostly in the fleshy, growing, tender parts of the tree, including the blossom clusters, young twigs, and the bark of larger branches, and even on the body, collar, and root system of the tree. Under certain conditions the bacteria spread into the wood to a considerable extent. The disease attacks the pear, apple, quince, and other related fruits of the pome family. While the leaves are attacked to some extent, particularly the leaf stems and midribs of the younger leaves, the main killing of the foliage results from the death of the twigs and branches of which the leaves are located. The dead branches and other parts give no evidence to the naked eye of the cause of their death and thus resemble somewhat limbs killed by fire; hence the name fire blight, particularly with blight on the apple, is often applied.

#### How the Tree is Infected.

The germs get into the tree in several ways. First and most important is the blossom blight. Flies and other insects carry the germs from the gummy exudate on the hold-over blight to the opening blossoms and infect the nectaries of the flower. Bees and other insects carry the germs from blossom to blossom and tree to tree and even to adjacent orchards and spread the disease rapidly during the blooming period. During the present season pear blight has been particularly bad, especially the blossom blight on both pears and apples. The outbreak of 1915 stands out as one of the worst in history, particularly on account of the unusual amount of blossom blight on the apple.

Next in importance after the blossom blight, and in some cases the most serious phase of the disease, is the infection of the tender tips of growing twigs. Thousands of these young twigs may be killed on a single large apple or pear tree. The blight may extend from the infections on the blossoms or from twigs down on to the larger branches, thence to the body of the tree. The branches, bodies, and more particularly the

collar and even the root system of the tree, may be infected directly by the germs. The infection may come from a fruit spur, water sprout, or even a sprout from the root, or the germs may be introduced by punctures by insects, birds, implements, or other means, directly into the fleshy bark, or even may enter, in certain cases, through growth cracks. Ordinarily the cuticle of the tree protects it from the entrance of the germs, otherwise there would be much more destruction of trees than actually occurs.

Each infection, no matter where it occurs, should be looked upon as an individual case of pear blight. The disease resulting from the various modes of attack for convenience are given various names, such as blossom blight, twig blight, body blight, collar blight, and root blight. The lower down on the tree, as a rule, the more dangerous is the blight. The tree may have a thousand or more twigs and blossoms killed in the top and not be seriously or permanently injured, while a single case of body blight or collar blight may result in its death. Each infection is to be looked upon as a definite, limited, diseased area. The part attacked is usually destroyed, though the disease may occur in the outer fleshy bark of the limbs and branches without always penetrating to the cambium. When the cambium or vital layer between the wood and bark is killed, death of that particular area, of course, results.

#### Secondary Control Measures.

For various reasons spraying has not been practically successful in controlling the disease. The eradication method, or actually cutting out the diseased area, is the principal way of controlling pear blight. Other methods, such as withholding stable manure and nitrogenous fertilizers, moderate cultivation or withholding it completely, seeding the orchard down to grass or clover, or sowing rankgrowing cover crops after the blight appears in the spring, such as cowpeas and sorghum in the Middle States, oats, millet, or similar crops in the Northern States, all help in a secondary way in reducing the severity of the blight. In the irrigated orchards the use of the minimum amount of irrigation water is also advisable.

#### Direct Eradication.

The main method of controlling pear blight, however, consists in cutting out the diseased tissue wherever found and disinfecting the wound and the instruments to avoid spreading the disease. In the great majority of cases fortunately the blight comes to a definite standstill in the bark, after killing a certain distance, and stops. The germs die out in the dead bark, a crack or crevice forms between the live and the dead bark, and the case ends itself naturally and heals out. In many cases, however, the disease, while dying out in the older parts, keeps on spreading on the margin, the germs renewing themselves by multiplication and infecting new areas of fresh bark. When they manage to live through the dry, hot summer weather and keep alive until autumn, when the leaves drop from the trees, they almost invariably live

## Greatest Two Weeks of Utah's Year

January 24th---February 5th, 1916

JUST AT THE TIME THE FARMER AND HIS  
WIFE NEED A VACATION.

## Farmers' Round-Up

AND

## Housekeepers' Conference

AT THE

## Utah Agricultural College Logan, Utah

The most notable annual convention held in the  
Inter-Mountain States.

Progressive Farmers, Home-makers, State Scientists  
and Educators will be in attendance.

**Practical Lectures** will be given by experts on Utah  
Farming and Stock Raising which aggregate  
\$200,000,000 and on the various phases of Home  
Management.

**Special emphasis** will be placed upon

How to Increase Farm Profits

and

How to Improve Methods of Marketing

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Opportunity will be given for laboratory work in  
the several departments:

Floriculture (work given in greenhouse.)

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Veterinary Practice (work given in Veterinary  
Hospital.)

Potato and Grain Diseases (In Botany  
laboratory.)

Judging Agricultural Products (in Agricultural  
laboratories.)

Home Nursing (work given in Women's Build-  
ing.)

Registration fee \$1.00.



over winter, and though greatly checked by the cold weather of the winter, are not killed or apparently even injured by the cold. Such cases become hold-over blight, and by this means the supply of germs is kept over in the orchard for the next season. The hold-over blight cases may extend considerably and result in further damage to the tree by the extension of that particular area, but their worst feature comes from the fact that they supply the gummy exudate and the virus for new infections on the blossoms the following spring. When warm weather comes in the spring and root pressure fills the tree with sap the hold-over cases start off vigorously and exude the gummy matter, especially in moist weather, literally teeming with the pear blight bacilli. Insects, mainly flies, carry this to the opening blossoms.

Cutting out pear blight, therefore, has a double purpose, first of stopping the blight and cleaning up the tree, and second of preventing the hold over. Much good work on blight can be done in the summer time, but the final cleanup should occur in the fall. Summer cutting, beginning as soon as the blossom blight shows plainly and continuing until the fruit is about half grown, is helpful. The best time to do it is in periods of dry, sunny weather. On young trees it is often very important, particularly on young pear and apple trees, to head off the blight by cutting well below it as soon as it shows up in the spring and summer.

#### Examine Bark Thoroughly.

In all blight cutting, either summer or autumn, it is important to examine thoroughly by cutting off the bark around the lower edge of the infection to determine the lowest point at which any change or color, even a

water-soaked or transparent condition, can be detected with the eye. Young or active blight on the lower margin is readily distinguished by its moist, gummy or sticky character and either water-soaked or usually reddish discoloration of the bark. This is in rather marked contrast with the dry, dead bark where the germs have died out. Having found the lowest margin of the disease, if it is on a limb the knife, pruning shears, or saw is used, cutting well below the infection. If the disease has stopped and the dead, dry bark is sharply defined in contrast with the live portion, the cut may be made quite close below the margin, or it may be made where any convenient branch emerges or where the limb leaves the main branch or the trunk. If the freshly blighted area is short and the blend is rather abrupt between the dead and live portion, the cut may also be made rather close to the diseased area is required by the nature of the branch. Six inches may be sufficient in such cases, but the cut should always be made on to sound bark and wood. If the saw is used it is always desirable afterward to trim the edges of the bark and the surfaces of the saw cut on the wood with a sharp knife to see if the whole surface is normal. If a water-soaked appearance is found, even on the surface of the wood, this indicates that the germs have penetrated the woody vessels and a lower cut is necessary, repeating the same process.

If the disease has run into the bark of a larger branch or extended down on to the body, the bark should be thoroughly removed from this area, cutting an inch or so at the margin and 4 to 6 inches or even more at the bottom, according to the virulence of the case as suggested for work on the branches.

A large bladed pocket knife, a scraper, and three-fourths inch carpenter's gouge, kept well sharpened, are useful in cutting out the bark on these areas. The same principles of looking for water-soaked areas in the wood should be applied here, and the gouge, or perhaps the chisel, used to remove all suspicious wood and bark. The edges of the bark should be trimmed smoothly and neatly, so that they can be readily disinfected and healing of the wound can properly take place.

#### Use Disinfectants.

In all cases of blight cutting described above, a disinfectant should be carried constantly by the worker and each pruning wound or scar should be thoroughly wiped and saturated with this disinfectant and the tools wiped and cleaned with disinfectant before going to the next case. Disinfection of the tools before they are used again on any other part of the tree is necessary to insure success, as infected tools may carry blight from diseased to healthy parts. Various disinfectants may be used. One of the most convenient is a water solution of corrosive sublimate (1-1,000). Tablets can be purchased at the drug store which will make this strength by adding one tablet to a pint of water. The solution should be kept in a bottle with a cork and the operator should carry a sponge or roll of soft cotton cloth for saturating with the disinfectant and for wiping the wounds and implements. The most convenient way is to have a small kit or a basket and carry all

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## Have You Spare Time?

We have a proposition that should interest any one who has a little spare time or some one who wants to devote their entire time to it. It is work in connection with the Utah Farmer and another magazine. If you are interested write us today as we will only give it to one person in a town. You can make some money this winter if you will push the proposition we will make you.

**UTAH FARMER**

**Lehi, Utah.**

the tools, including the bottle of disinfectant, in this kit. The sponge or swab of cotton cloth can be tied to a stout string about arm's length and fastened to a buttonhole or the operator's clothing.

**Caution:**—Corrosive sublimate is a deadly poison. The tablets and the bottle of disinfectant should be so labeled plainly and should be kept away from children and other persons, and the bottle of solution, when not in use, being very inexpensive, should be emptied.

Corrosive sublimate is a powerful germicide, but does not penetrate deeply. It does not kill the cut edges of the bark. Other disinfectants can be used. A tablespoonful of ordinary bleaching powder or chloride of lime placed in a gallon of water is effective. A 2 per cent bluestone solution is also

effective. Ordinary 40 per cent formaldehyde solution at the strength of 1 ounce to the gallon is likewise a good germicide. These solutions should always be kept in glass bottles or otherwise chemically clean containers. They should never be put in tin cans or metal containers of any sort, since the solutions are decomposed and rendered inert by metals. The water used should be reasonably clean and the sponge or swab should be kept clean by occasional washing. (To be continued in our next issue)



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## POULTRY

### SELL EGGS IN WINTER.

R. M. Sherwood, Kansas Experiment Station.

A good poultry house is what you need, Mr. Farmer, if you are going to have plenty of eggs to sell this winter.

Some farmers feel that winter eggs are too hard to get to make it worth while to try to produce them.

"If one has a good poultry house, he should have little trouble. Early matured pullets properly housed and fed should produce a large number of eggs."

The house, need not be an expensive one. It should furnish the fowls protection from the winds and storms, and should be so constructed that it will have proper ventilation. A chicken breathes three or four times as much air in proportion to its weight as a human being. Ventilation makes a house somewhat colder, but dryer, and dry, cold air is much better for the fowls than moist warm air.

#### Must be Dry and Odorless.

The house should be built with the west, north, and east sides tight during the winter months, while the south side should furnish the ventilation. There may be a few glass windows on the south side, but more space should be left open, except that curtains may be dropped down for the nights; and on a few very stormy days. On some occasions these openings may be left uncovered during the night. Sometimes curtains do not allow enough air to circulate. In these cases, openings may be made just under the roof to allow the air to circulate more freely. Whatever the system of ventilation may be, it is essential that the house should be dry and free from bad odors.

The house should be so constructed that it can be easily cleaned. The floor should be smooth. Concrete is good for this reason. It is true, however, that concrete floors built on damp ground are damp. To avoid this trouble, a concrete floor may be built on a layer of eight or ten inches of rock or other material which will not carry the moisture from the ground. Some poultrymen use floors made of hollow building tile, and find them very satisfactory. Where these are used the tile are laid on a smooth surface and the crevices filled with cement.

#### Keep Mites in Check.

The perches should be built so that there will be as few places for mites to breed as possible. If perches are removable, so much the better. A board platform should be placed about eight inches below the perches to catch the droppings. This makes a cleaner floor, and thus adds to the capacity of the hen house. It makes it easier to clean the house, and aids in keeping the mites in check.

The nests also should be built so that the mites can easily be combated. They should be covered or protected so that the fowls cannot roost on them. This is necessary in the production of a good grade of market eggs.

After the early matured fowls are placed in the house, feed should be given which will form yolk, white of egg, and shell. The common grains furnish plenty of material for yolk. Alfalfa, bran, buttermilk, and meat

scraps furnish material for the white of egg, while oyster shell furnishes the material for the shell. Good water is of course necessary. Some of the grain feeds should be fed in a deep litter of straw on the floor, to furnish exercise to keep the fowls in good condition.

### USE SOUR MILK, BEEF SCRAP, OR GREEN CUT BONE.

H. L. Kempster, Missouri College of Agriculture.

"Milk or meat in the ration may make all the difference between profit and loss. We know from our tests at the Experiment Station and from the experience of poultrymen everywhere. We got only 945 eggs from a pen of hens that ate no animal food, while another pen of hens, no better in any way, but fed sour milk, laid 1783. Those fed beef scrap laid 1802 eggs. While this is a higher record than either of the others, the sour milk is so much cheaper and easier to get on most farms that we recommend it most highly. At 20 cents a dozen, the eggs from the hens fed sour milk brought \$29.71 and those from the hens fed beef scrap, \$30.03. The difference wouldn't begin to pay for the extra cost and trouble of beef scrap. The big thing to remember is that the hens fed no animal food brought little more than half as much egg money. Theory and experience both say 'Feed the laying hen sour milk as part of her ration.'"

#### A Good Sour Milk Ration.

Corn, 4 parts, Wheat, 2 parts, Bran middlings, 1 part, Corn meal, 1 part, Sour milk separately. Give 100 hens 2½ gallons of milk and from 19 to 25 pounds of other food a day.

#### ABOUT THAT WATER PAN.

How often do you clean up the water pans in your hen house? You ought to clean them every day. For a dirty water pan is the surest way of spreading disease throughout your flock.

The best way of handling water in the poultry house is to keep it in a cheap, flat wash basin that can be easily cleaned and refilled. It doesn't pay to bother with patent water tanks. You will have to fill them just as often as the basins, and they are harder to clean up.

Place the open basin on a box some eight or ten inches high and perhaps eighteen inches square, and make a runway for it. This keeps it from filling up with dirt and straw from the floor, and the hens do not climb into it in drinking.

Then put the box and basin in a sunny corner of the house away from the roosts and nests, so that no dirt can fall into it from above.

Clean it and refill it with clean, fresh water every day and you will have put the disease germs to flight indefinitely.

#### DON'T MIX

Poultry of different ages and breeds.

Eggs of different sizes, ages and colors.

The market pays from two to eight cents more for eggs of uniform size, color and quality.

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240-acre improved ranch near Richfield; independent water right; horses, cattle, hogs, chickens, turkeys, implements and some hay and grain goes with this place. Cheap at \$75 per acre; terms.

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RICHARDS DEFENDER, Grand Champion Boar was pronounced by many cavable judges to be the best Duroc Boar ever brought west. He is 17 months old weighs over 500 pounds. The big type with quality. That's why he has so many admirers.

We purchased Junior Champion Sow and first and second prize under six months sows, so that we now have in our herd practically every first prize winner at the 1915 show.

We can make immediate deliveries of young stock, either sex, from this champion herd at reasonable prices.

Express rates on stock purchased from us is a small item as our ranch is only 135 miles north of Salt Lake City.

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—Red Jersey Durocs—

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Arrange cooked cauliflower in alternate layers with white sauce in a buttered bake dish. Cover with buttered bread crumbs and brown in the oven.

"I wonder what has become of the old-fashioned dime novel?" remarked the old fogey.

"It has gone up to a dollar and a half." replied the grouch.

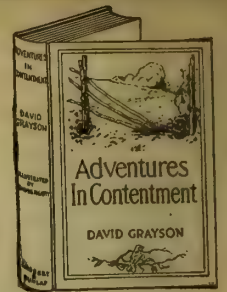
"I don't see why you call your place a bungalow," said mith to his neighbor.

"Well, if it isn't a bungalow, what is it?" said the neighbor. "The job was a bungle, and I still owe for it.





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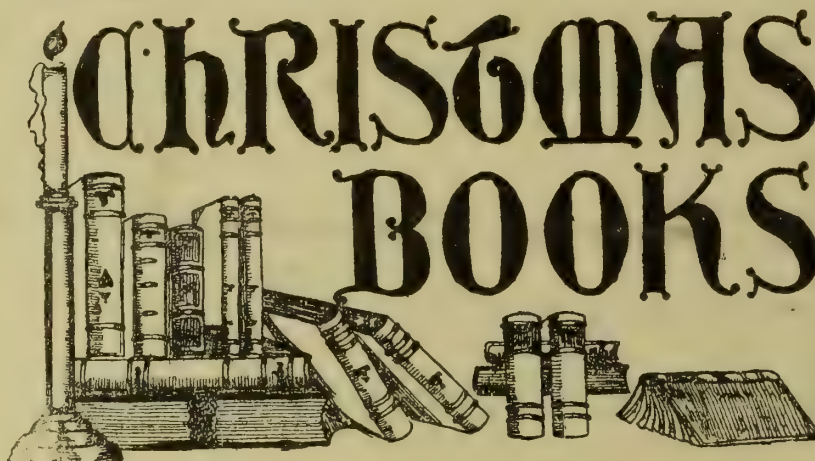
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# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region

OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE

VOLUME XII; No. 19

LEHI AND SALT LAKE CITY, UTAH

DECEMBER 11, 1915



## FIRE PATROLMAN ON HIGH DIVIDE IN A NATIONAL FOREST OF THE ROCKY MOUNTAINS.

Our government is doing a great deal to protect the forests from fire, thus reducing the loss for grazing and protecting the storage of our water supply. Each year fires are started in some careless manner on our hills or mountains that spread until the damages amount to thousands of dollars. Very few of these fires occur in the winter time. Next summer all should help these fire patrolmen in their work by being careful ourselves and encourage others to help in this important work of preventing forest fires.



# Mothering Mother!

You can't think of a steaming dish of mashed potatoes, a plateful of mellow biscuits, or a well browned roast of beef—the savory memory of which still makes your mouth water—without thinking of Mother.

You can't recall the time when you were far away from home and your toes poked out through your socks, and you didn't have a clean shirt to your back, when your mother's kindness didn't fill your memory.

These mothers—bless their hearts—are always in demand! Let them leave the town for a week-end visit; let them stay an hour too long at the village church—and the whole world goes topsy-turvey.

But, hanging to Mother's apron strings makes her day hard and long.  
HAVE YOU EVER LOOKED THIS QUESTION IN THE FACE—

## “HOW CAN I LIGHTEN MOTHER'S LOAD?”

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These departments of our paper will be strengthened every week. Our articles on hygiene and kindred subjects will help Mother in more ways than one, and for this very reason we know you'll want to keep it coming your way.

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VOLUME XII.

LEHI, UTAH, SATURDAY, DECEMBER 11, 1915.

No. 19

## Sheep Feeding

By I. D. O'Donnell,

An old recipe for making chicken pie starts with the very important requirement, "First get the chicken." So with sheep feeding there is one all important preliminary, and that is first get the feed. I am a strong advocate of sheep feeding where the farmer has the necessary feed of his own raising. Buying the sheep and buying the feed for them is just plain gambling for a farmer, and it is a game that has brought financial ruin to some of the best-posted sheepmen in the country. If you have raised your own feed you can go into sheep feeding with small chances of loss and reasonable assurance of financial gain and absolute assurance of the improvement of our land if you make good use of the fertilizer produced by the sheep.

There are many plans of sheep feeding which have been tried out and found satisfactory in different parts of the country. I will outline briefly two plans which are satisfactory in the alfalfa growing sections. In these semi-arid sections most of the sheep feeding is done in the open—that is, without sheds—a windbreak, which may be either a tight fence or a row of trees, being considered sufficient.

One plan, generally known as the Colorado plan, provides for the feeding of alfalfa from one set of lots or runs and the feeding of grain or concentrates in one grain yard which serves several lots of sheep. For convenience we will assume we are feeding 2,000 sheep. This will require four runs each 250 feet long and 14 feet wide with hay bunks 14 feet in width between them. All of these runs must communicate direct with the grain feeding yard which for convenience may be about 60 to 75 feet wide and about 125 feet long. This yard should contain the equivalent of 20 grain racks each 14 feet in length and so arranged that the sheep may feed from both sides. The grain racks are best made portable, about 14 feet long, 12 inches wide, and 2 to 4 inches deep, set on legs so the bottom of the trough is 14 to 18 inches off the ground. A 6-inch board should be placed lengthwise about 10 inches above the trough to prevent the sheep standing in or jumping over the trough. The grain ration for 500 head, or one yard of sheep, is placed in the racks and the sheep from one yard turned in. Gates

leading from the hay yards should be the full width of the yards to prevent crowding. While these sheep are in the grain yard the hay wagon is driven through the empty run and hay unloaded into the racks on both sides of the wagon. When the sheep have eaten the grain they are returned to the hay run and the same operation is performed with each of the other three runs of sheep.

The plan of feeding which I favor is that of feeding hay and grain from the same rack. Under this plan it is best to provide a yard into which the sheep may be turned while the racks are being filled. The racks which are 14 feet long and a little more than 2 feet wide will each accommodate about 30 sheep. The racks should be arranged in a double row so the hay

work themselves. Clean and fresh water must be before the sheep at all times. Do not neglect this. It is considerable work to keep fresh water before the sheep in cold weather, but it must be accomplished. The sheep must be provided with plenty of clean salt. Some feeders roll a barrel into a yard, cut a few staves out of the side of the barrel, and let the sheep help themselves, and this plan is a good one. Keep the sheep quiet. An old German adage, "The eye of the master fattens his cattle," holds good in sheep feeding. Keep close watch on the sheep; do not let a day pass without closely observing all details. Pay particular attention of the droppings, for by this you can determine to a great extent where the sheep are thriving. If

them through the feeding period without their being dipped. If the sheep are taken on in the fall they may be dipped without much trouble at a cost of about 2 cents a head, any of the standard commercial dips being satisfactory.

If the sheep are received before bad weather and there is pasture available, they should be turned into this pasture until it is eaten short or until bad weather sets in. It is well to separate the sheep into the different ages or sizes in putting them into the yards; put those of an age or of a size together. Put all the poorest together so they may be given special care and attention. By so classifying the sheep they may be handled more easily and the small and weak will not be crowded out by the stronger ones.

Be regular in your feeding. The sheep is a good time-keeper and appreciates getting its meals on time. Strict regularity in feeding is profitable.

The amount of feed to give sheep is governed by their breed and age. The coarser and heavier breeds consume more feed than the fine, light breeds. Lambs require less feed than mature sheep. The amount of hay is usually governed by feeding just what they clean up well. When they are first put into the pens they are fed hay only. After two or three weeks on hay only the grain is added, starting only a small amount per sheep—one-tenth of a pound per head per day—though with lambs it is well to start with less than this. This grain ration is increased very gradually until the equivalent of 1 pound of wheat per day for a mature sheep is given. This amount with all the alfalfa hay desired should be a full feed for fattening sheep.

"Life is largely what we make it, and whatever may be its clouds and storms, they will be chased away at length by the clear sunshine of a noble character."

The tender words, and loving deeds, which we scatter for the hearts that are nearest to us, are immortal seed, that will spring up in everlasting beauty, not only in our own lives, but in the lives of those born after us.—Spurgeon.



wagon may be driven between them and hay unloaded on both sides. After the racks are filled with hay the grain or concentrate is scattered over the top thereof and the sheep turned in. This plan assures a good distribution of the grain among the sheep and the hay is eaten with more relish and cleaned up better than where the hay and grain are fed separately.

Either of the described plans is satisfactory. There are general conditions which must be observed by the feeder under any plan of feeding. The feed lots must be kept dry; sheep are very particular about where they lie down, and to keep them contented dry bedding must be furnished during wet periods. Unless you are feeding old and broken-mouthed ewes, do not grind the grain for the sheep. Sheep are equipped with the best of grain grinders, and they prefer to do this

the droppings are of a yellowish brown and soft in texture, all is well. If they are hard, dry, and black, the sheep are constipated, and this condition must be relieved at once. A small addition of bran to the grain ration is used with success by some feeders to cure this condition. A sure method is to add flaxseed to the amount of about 2 per cent of the grain ration and continue this during the balance of the feeding period. The addition of oil meal to the ration has also been found satisfactory in curing constipation.

Every sheep feeder should be provided with a dipping vat and the sheep should be dipped as soon as they are received. It is very difficult to dip sheep properly in cold weather, but it is better to dip them in cold weather than to run the risks of carrying



## DAIRYING

### DAIRYING

Theron Bennion.

It is sometimes a difficult problem to choose what type of agriculture we should follow. It is evident that from a financial standpoint, the type bringing the best annual profits should be followed. There may however be a good many obstacles. It first is not an easy matter to know just what kind of farming will bring best returns from a particular piece of land. Even if this has been discovered, it is sometimes difficult to get sufficient capital to immediately begin that system. In some localities there are certain agricultural specialties that will yield an excellent profit under proper conditions, but due to weather conditions or market failures the system becomes rather speculative in nature. This is far from the most satisfactory type of employment for the average farmer. He prefers a reasonable income each year with the element of speculation removed as far as possible. With most agricultural crops the weather has a very marked influence on the success of the farmer. The supply of these crops is consequently uncertain which in turn causes the prices to fluctuate a great deal from year to year. This uncertainty of profit is disadvantageous as it makes the future uncertain and therefore discourages business expansion that might be possible under more certain conditions. Before one chooses therefore the system of agriculture to follow it is advisable to note carefully the conditions and individual possibilities of the farm and farmer. In many cases a wise choice would lead to dairying.

Dairying is among the safest of all agricultural pursuits. The speculative part is quite illimitated and consequently one can calculate very closely the possible profits from the business. The feed problem by the aid of the silo has been greatly simplified. Prices are fairly constant. In fact dairying has almost been reduced to a science. One needs only to study the conditions of Denmark and learn of her methods to solve a great many of the difficult problems attached to it. Here specialization has been carried so far that expenses and receipts can be figured almost years ahead, with quite a degree of accuracy. There the feed problem is mastered the markets made certain

and profits assured the good manager. Even in our own country dairying has passed beyond the experimental stage. It has proven to be a profitable business one that requires careful observation and study but in turn offers a good income. It is a type of farming the best agriculturists of the world are engaged in. This alone is an indication of its many merits. Unless however one is willing to study the principles concerned and profit by the experience of others he is almost doomed to failure.

There is not so much importance attached to breed as strain. Most of our popular breeds are good but in each can be found inferior producers. In choosing a breed it is very important that a good strain be obtained. Generally it is the best system to choose the breed which predominates in the community. This not only offers a better opportunity for observing how it responds to local conditions under different methods of treatment, but it assures more buyers for surplus stock. As a community becomes noted for a certain breed the farmers can expect the reputation of such a section to grow. It also makes possible a better co-operation, where the aims of all farmers are identical.

There are many farmers who think it necessary to start out in the dairy business by purchasing registered cows. Although the importance of good blood must be recognized it yet is questionable from financial standpoint whether or not such an initial expenditure is wise. Most farmers are not extremely endowed with ready cash. If one is not mindful he is apt to over invest at the beginning and find it very discouraging and in fact almost impossible to meet payments on borrowed capital. It usually would be more practical to obtain some good grades and then by careful breeding and selection improve the herd. All inferior stuff should be illimitated and calves from best producers saved for future use. In such a way can a very profitable herd be bred up without a very extravagant expenditure at the outset. The building can also be improved as conditions make necessary. If the herd can be made to furnish the means for such improvement, it in a great measure simplifies the problem.

After choosing the breed improvements should begin at once. Pure bred bulls should be used. The argument for crossing if carried far enough will lead the breeder in possession of mongrel stock. In such a case the very ends for which breeds have been developed are defeated. Even though one start with grade stock, if the pure bred bull is constantly used, that blood will be made to predominate more and more. In time it might be possible to get into the pure bred business. In either case a farmer cannot over estimate the value of selection. Records should be kept on each individual cow and unless the production shows quite a marked profit it should be illimitated. This of course is assuring the cow is given a good opportunity to demonstrate what it can do. At times it will be necessary to do away with a very excellent appearing cow. If however she fails in

## Dairymen!

---you'll be pleased to hear of this---

We have been very fortunate in making arrangements with W. E. Carroll Ph. D. head of the department of Animal Husbandry at the Utah Agricultural College, to write a monthly letter to dairymen dealing with subjects that will most interest them.

These letters may be had regularly at absolutely no cost to you by simply writing us, requesting us to include your name in the mailing list.

Professor Carroll will also conduct a "question and answer department that will be free and open to all.

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proper production she must be classified as an inefficient machine. It is impossible to calculate a profit from a show cow if she is a poor producer.

The farmer who decides to go into dairying with a well planned future in mind and with the conviction that he will diligently work for the betterment of his herd and perfection of his business, will not only derive a good profit but will receive much pleasure from participation in such employment.

Utah Farmer:

Gentlemen—Will you also advise a good ration for dairy cows in the columns of your paper where alfalfa hay is being fed, if oats is good to go with alfalfa hay, that is ground oats and etc.

Very Respectfully yours,

A. L. DATSON.

Answered by Dr. W. E. Carroll.

Alfalfa is necessarily the basis for all dairy rations in our State. Many cows receive nothing in addition to alfalfa hay. This is probably the most economical ration under conditions where hay is cheap and grain expensive, and the cows light producers. Ordinarily, however where hay is worth anywhere above \$8 per ton and grain from a cent to a cent and a half, it will pay to feed high producing cows some grain. Under these conditions about one pound of grain can be fed for each three to five pounds of milk produced per day.

The kind of grain to use will depend almost entirely upon the relative prices. Very frequently bran is the most desirable grain to use. This is not because bran and alfalfa makes the best ration, but because bran is usually cheaper than most other grains. Such a ration would supply more protein than the cow needs, tho this would do her no damage. Barley is the grain usually next in price and can be fed, chopped, steam-rolled, or soaked, according to conditions. The kernel itself is so hard that without some preparation a considerable quantity will pass through the cow undigested. Where corn can be raised, chopped corn or

corn meal with alfalfa hay makes an ideal combination. Oats usually are rather expensive for the cow, tho they make an excellent cow feed. Any one or a mixture of these grains can be used. Corn is the best single grain; barley, oats, and bran rank about 10 per cent lower than corn in value. With these prices any man can figure the most desirable grain to use.

### FEEDS AND FEEDING.

The new edition of 1915 has just been published of Feeds and Feeding by W. A. Henry and F. B. Morrison. It has been revised and brought up to date. About one-third more matter has been added a larger book with 85 additional pages. It is a condensed presentation of the most important findings of the investigators of both the old and new world in the science of animal nutrition, together with the most important results of the vast number of feeding trials which have been conducted at the experiment stations in the United States and other countries. To the man who is feeding cattle many or few the book will be a valuable help. The value of the many different feeding stuffs for each class of live stock and the effect of various methods of preparing feed, systems of feeding and caring for stock are all discussed in this modern book. It has been the aim of the authors to present all this information in such a simple and plain way that it will be helpful to all.

The book contains 692 pages and sells for \$2.25 is published by the Henry-Morrison Company, Madison, Wis., or you can order it from the Utah Farmer.

We make the special offer, the modern 1915 addition of Feeds and Feeding and The Utah Farmer one year for three dollars book prepaid to your address and The Utah Farmer every week for one year.

### HIS DESIRE

Her Father (viciously)—So you want to become my son-in-law young man? Young Man—No; I merely want to marry your daughter.—Indianapolis Star.

Steady growth is a testimonial to "safety and service."

The number of accounts with this bank has been tripled in four years.

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## School Children's Shoes Should Be Water-Proofed

By The Oil Philosopher.

The danger of wet feet would not be so great to school children, were it not for the fact that they sit through a whole day's session of school without a change of stockings and shoes. Colds, lagrippe, pneumonia or some other sickness generally results.

With shoes waterproofed with

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school children can enjoy dry, warm feet, regardless of the fact that it is wet and slushy out of doors. Water runs off leather treated with this oil just like it runs off a duck's back.

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## LIVE STOCK

### PASTURE AND FEEDS FOR HOGS.

Ephriam, Utah.

I have a number of questions which have arisen in connection with a hog farm at Ephriam, San Pete County, Utah. We would highly appreciate it if you could give us any information on these points.

The farm consists of 200 acres, part of which is under irrigation. Forty acres are in alfalfa, about 50 acres in barley and oats. Wild hay is grown on a portion of it. All is potential agricultural land.

I am thinking of starting in the hog business, and am wondering what the possibilities are with hogs on this farm.

1. What do you think of the advisability of raising field peas, or soy beans or both along with alfalfa for summer pasturing? The soil has a limestone origin.

2. Of what value would the peas be after maturity as a fattening food?

3. What yield could be expected here from field peas and how would you take care of the crop?

4. How much grain such as barley, should be fed along with the peas and alfalfa?

5. What are the food qualities of barley in such feeding?

6. How much alfalfa will a 100 pound pig eat per day?

7. How much barley should be fed a 50 pound pig? A 100 pound pig?

8. What profit and what gain in weight could be expected from a hog fed field peas, alfalfa, and a small portion of barley and wheat?

9. How would you arrange the fences, sheds and feeding troughs on a farm running 1000 head of hogs? 150 brood sows being kept. The farm is approximately square.

10. What sort of feeding racks would you devise for the alfalfa and peas?

11. What breed of hogs are best adapted to conditions here? Would it be advisable to cross breeds such as Duroc and Berkshires?

12. I was considering Duroc Jerseys as a straight breed for brood sows. Are they a superior breed in this section of the country? What sort of pigs could be expected by using Berkshire boars on Duroc sows?

13. Could you suggest any breed or cross of breeds that would thrive best on such feed as I have mentioned?

14. Would it pay to run 100 head of old ewes in connection with such a farm? The ewes would be bought in October and bred so as to lamb in February.

15. Would the field peas make as good a roughage as alfalfa for ewes and lambs?

Thanking you for any suggestions you may give and trusting that our co-operation may be mutually beneficial, I am.

L. H. W.

Answered by Dr. W. E. Carroll.

Most any farm in which alfalfa and grain can be grown is suitable to hog production.

1. There is no better single pasture crop for hogs than alfalfa. The peas will produce practically as much pork per 100 pounds as alfalfa but yield a much smaller tonnage per acre

during the season. After the hogs have been on alfalfa pasture most of the summer, if a patch of peas is available which are just beginning to ripen, the hogs can be turned in on these and will harvest them, peas, vines and all, to pretty good advantage. From there they can go right into the fattening pens with the good start the peas gives them.

2. In general peas make a pretty good feed for hogs, though if they compose the entire grain ration, a rather dry undesirable bacon is produced. The trouble involved in harvesting, threshing, and grinding the peas makes them rather troublesome to handle and they are probably no better than some other grains that are easier to raise, though if you have peas available they can be ground and make up from one-third to one-half of the grain ration to pretty good advantage. Especially are they valuable when ground for young growing pigs.

3. Dr. Harris tells me that a good yield of peas is around 20 bushels per acre. The yield varies so much that he says he can not give you any estimate as to what might be expected in your locality. The peas are drilled in as early as possible, and the crop handled very much as is wheat. Threshing is done by hand or with a special thresher.

5. Barley is slightly less valuable than corn as a hog feed. For fattening purposes it is about equal to wheat and not quite so good for young pigs.

6. From 5 to 20 hogs per acre may be pastured on alfalfa. With the smaller number 3 crops of hay are usually cut; with the larger number about 1 cutting is made.

8. A young hog from 4 to 8 months old should gain around 2 pounds per day on field peas, alfalfa, and barley.

9. There are a number of ways of cutting up a farm for your hogs. The A-shaped hog pen or some other individual colony house has proved very successful. It can be used for a farrowing pen provided farrowing is not done too early. It will winter three or four head of mature sows, but if farrowing comes too close together it will be necessary to have a pen for each sow. Each pen can be put in a small run about 1 by 2 rods is sufficient. If these are adjoining the alfalfa fields the pens can be used for shade in the summer. It does not pay to keep too many pigs together at any time. In the summer days when it is possible it is better to have 4 pastures for the pigs. Divide them into 2 bunches of about equal age and size, turn one bunch into each of 2 fields. When it is necessary to irrigate, the hogs can be turned into the other two fields while irrigation is done. This saves them tramping and rooting so much.

10. A feed rack about 3 feet high, 20 inches wide (inside measure) at the top, and 15 inches at the bottom, the uprights being 2 by 4 placed 6 inches apart; on each side is a trough-like arrangement made by placing a 2 by 4 in the bottom and another 2 by 4 slanting up for the outside.

11. The breed of hogs is a secondary consideration. If you want a bacon-type hog, the Tamworth is good, for lard-type, the Duroc-Jersey, Berkshire, or Poland China will give satis-



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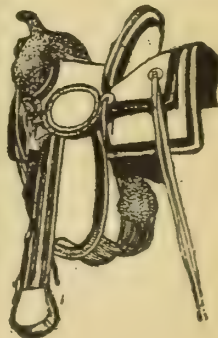
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faction. Select the breed you are most interested in. White pigs are apt to sunscald unless ample shade is provided. A good market hog is produced by cross breeding but, of course, these cross breeds can not be bred as the good effects seem to be lost. It would, therefore, be necessary to keep on hand a supply of both breeds for breeding purposes.

(Continued on page 13)



## Field and Farm

### GENERAL EFFECTS OF MANURE.

Agricultural Lesson, XVI.

Prof. J. C. Hogenson.

Manures in general have a tendency to loosen up the soil. The small amount of humus found in sand soils is, in a large measure, due to the more free access of air to the interior. Manure, however, enables sandy soils to hold more water and this in turn makes them less readily penetrated by the air and, so, humus does not waste so readily. Manures darken the color of the soil, and the color, especially when dry, so that the rate of evaporation from its surface is small, has a marked influence on the temperature. The darkest colored soils are the warmest and have the least daily variation. As a general rule, the surface tension of a strong solution of plant foods is greater than a weak one, and hence the rate of capillary movement of water toward the surface or toward the plant roots is increased where manure has been added than where it has not been added.

#### The Differences in the Natural Fertility of Soils.

There is a vast difference in the natural fertility of soils. Some do not produce well from the start unless special attention is given to making them productive; others produce large crops for a short time, and rapidly diminish in fertility; while others, known as strong soils, remain productive for many years without attention to their fertility. But even the strongest soils will wear out in time unless they are intelligently handled. Curiously enough as the tide of migration moved westward in this country, the settlers found soils of increasing natural fertility as they went, and in each new settlement the opinion prevailed that the soil was inexhaustible. But even the strong soils of the west have been cropped with grain and abused by improper methods of tillage until many of them show signs of approaching exhaustion.

#### Effects of tillage.

Improper methods of tillage add greatly to the evil effects that result from the lack of humus. In many parts of the country the land is plowed only three or four inches deep. Below the plowed stratum the soil becomes densely packed and unfit for plant roots. When such soils are plowed deep and this packed sub-soil mixed with the upper portion, the growth of many crops is retarded. It is therefore a good method to plow a little deeper each year until a depth of eight or ten inches is reached.

#### Improving The Soil

With the exception of nitrogen, most soils, even those that are very poor, usually contain an abundant supply of plant food, though sometimes combined with other elements so that the plants cannot make use of them. To increase fertility we must improve texture and add plant food and humus. Tillage will do much to improve texture, but this will not suffice, we must add humus. In doing so, we add plant food and

make the soil more permeable to air and water.

There are three general methods of adding humus to the soil. 1st, by the addition of stable manure. When manure is not available, it should be made so by raising more forage crops, and keeping more livestock. 2nd. When stable manure is not to be had, crops may be planted for the purpose of turning them under. A third method of adding humus is to grow crops like alfalfa and timothy. Their roots thoroughly penetrate the soil. Old roots decay and new ones grow. When the sod is plowed up, more or less vegetable matter is turned under. This, with the mass of roots in the soil, adds no small amount to the supply of humus.

#### Crops Suitable for Green Manuring.

Alfalfa in the west is the greatest green manuring crop. Crimson Clover is another good crop to grow for this purpose. It makes a good hay if cut when coming into full flower.

Vetches—The various vetches are considered valuable green manure.

Rye—Rye is not appreciated by the American farmer. It is very hardy, will grow on the poorest soil, and is an excellent green manure crop for turning under in the spring. It makes a great deal of humus and improves the texture of the soil.

Cow Peas—A good way to receive the beneficial effect of cow peas on the soil is to sow it in corn at the last cultivation.

The quickest way to build up a worn out soil when barnyard manure is not plentiful is to first use green manure, then grow only forage crops, buy grain to feed with them and return all the manure thus produced to the land. Dairy farming permits such a system to be practiced.

Another type that gives fairly quick results is to grow a succession of pasture crops for hogs, keep the hogs on these pastures and feed them from a fourth to a half ration of grain. In the middle states the following system is adapted to this type of farming: Grow corn enough for the pigs on part of the farm, sowing either cowpeas or crimson clover or rye in the corn yearly to keep up the fertility. On the remainder of the farm run the following three year rotation: Sow oats in the early spring. Follow by rye sown in August, follow this by soybeans the following spring. In September or October sow rye again after the soybeans. Late the next spring sow either soybeans or cowpeas and begin over again with oats the succeeding spring. In sections where alfalfa thrives the pigs may be pastured on this crop in summer and fed a little corn or barley. Such a system takes nothing from the land, but care must be taken not to puddle the soil by pasturing in wet weather. There should be a field of good sod in reserve for such periods.

To sum up, we may build up and maintain the fertility of the soil by feeding a large part of the crops and returning the manure to the lands. If this cannot be done, plow under crops grown for the purpose. Plow deep. Grow leguminous crops.

#### The Soil Atmosphere. Oxygen.

Air in the soil is essential to plant

## HARVEST THE HOLT WAY



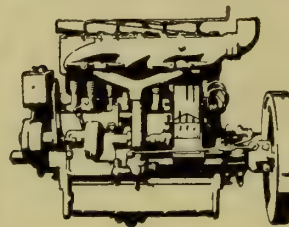
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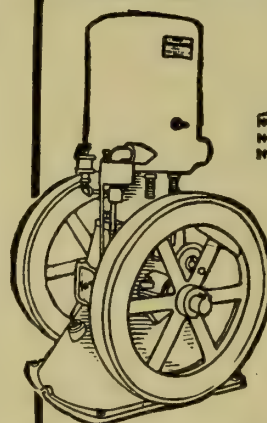
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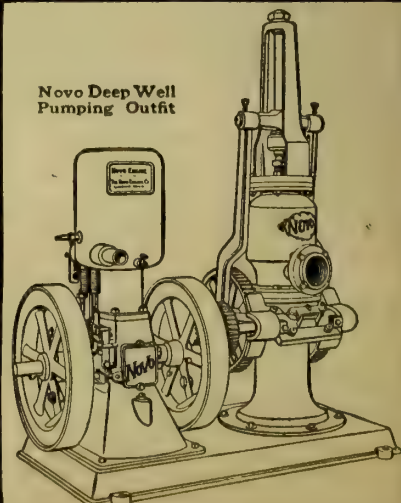
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growth, when oxygen is excluded from seeds they will not germinate. Air in the soil is essential—1st so that decay can go on—2nd so that the plant roots can gather food for the plant—3rd to supply the nitrogen to the bacteria in the soil.

The amount of air in the soil is determined by the porosity of the soil. A loose soil of good texture will hold more air than a compact soil. The size of the pores themselves will also be greater.

The soil air contains much more carbonic acid gas than does ordinary air. The vegetable matter in the soil in decaying is broken down first into humus and then into carbonic acid gas, water, and free nitrogen, nitrates and ammonia, so that these gasses are found in excess in the soil air.

The movements of soil air are due to (a) barometric changes, (b) surface winds, (c) diffusion, (d) temperature changes, (e) movements of water.

Barometric changes—Any changes which occur in the pressure of the air above the soil is followed by a change in the volume of soil air. If the pressure falls, air escapes from the soil. If the pressure rises, more air is forced in. It is seldom true that the winds blowing across a field has the same velocity. It usually blows in gusts. This unsteady action tends at times to increase the pressure and other times to decrease the pressure, and, as a result, there is a tendency for air to enter and leave the soil on this account. The process of diffusion is very slow but it is continually taking place the more open the soil and the higher the temperature the more rapid will the exchange be. When the temperature of the

soil air is changed its volume will also be altered. The temperature of the surface three inches of soil often changes as much as 20 degrees so that the soil ventilation due to diurnal changes in soil temperature will range from nothing up to about twenty cubic inches per second foot. The water which enters the soil as rain or otherwise must displace a volume of air equal to the volume which enters the soil, and then when this water is again evaporated the same volume of air must again be returned.

The means of modifying the atmospheric content of the soil are (a) drainage, (b) cultivation, (c) the incorporation of foreign material causing textural changes.

When soils are under drained they are much more deeply and better aerated causing roots to penetrate more deeply which, when they decay leave open pores in the soil. Then when the under soil dries out after drainage, a great deal of shrinkage takes place and air takes its place.

Nearly all the operations of surface tillage and surface compacting modify the rate of entrance and escape of air from the soil. Plowing effects a complete change of air. Harrowing and cultivating have the same effect to smaller degree. Rolling compacts the soil and decreases soil ventilation or lessens the entrance and escape of air. Manure incorporated with the soil increases its air holding capacity as do also the roots of deep-rooted plants when they decay.

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Get money if you can. Get power if you can. Then, if you want to be more than the ten thousand million unknown mingled in the dust beneath you, see what good you can do with your money and your power.

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You can help carry a load for an old man. You can encourage and help a poor devil trying to reform. You can set a good example to children. You can stick to the men with whom you work, fighting honestly for their welfare.

Time was when the ablest man would rather kill ten men than feed a thousand children. That time has gone. We do not care much about feeding the children, but we care less

about killing the men. To that extent we have improved already.

The day will come when we shall prefer helping our neighbor to robbing him—legally—of a million dollars.

Do what good you can now, while it is unusual, and have the satisfaction of being a pioneer and an eccentric.

#### GERMANY'S APOLOGY

Germany's apologies somehow recall the little boy who was told to apologize to another little boy whom he had called a liar. He said: "Johnny, I am sorry that you are a liar."—Chicago News.

#### ONE BLESSING

Grubbs—I have just thought of something we ought to remember and be grateful for on next Thanksgiving Day.

Stubbs—What is it?

Grubbs—That there will be mighty few returning European travelers to whose experience we shall have to listen.—Indianapolis News.

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The Surplus is loaned to the members at 6 per cent interest per annum on first mortgages.

These mortgages are not sold, but they are placed in trust and bonds equal to their face value, bearing 5 per cent interest and secured by them, are issued and sold.

The money received from the sale of the bonds is then loaned at 6 per cent interest on first mortgages, which are also placed in trust, and bonds of equal value, bearing 5 per cent interest, are issued and sold.

This process is repeated until the Association has outstanding bonds equal to fifteen times the amount of its Capital and Surplus.

In addition to having the bonds secured by an equal amount in mortgages, the Guarantee Fund is pledged as further security for the bonds of the Association.

The bonds of the Association, thus secured, will be one of the highest class bonds issued in the United States, and will enable the Association to secure money for its members at the lowest possible rate.

### SEVEN AND THREE-TENTHS PERCENT

a year will pay a loan from us, both interest and principal in 35 years, without commissions, renewal charges, or other expense, and you may pay off your entire loan any time after five years.

Under the present conditions you are paying 9 per cent, or \$90 a year for interest alone, and at the end of the period for which it was loaned you still owe the principal of \$1000. Under our plan \$73 a year will pay off a loan from us of \$1000, both interest and principal at the end of the time.

This is a Co-operative Association, therefore, you must necessarily become a shareholder in order to enjoy the advantages it has to offer. Clip out, fill in and mail the coupon today. The sooner you join the Association, the sooner you will get your loan.

#### THE INTER-MOUNTAIN RURAL CREDIT ASSOCIATION SALT LAKE CITY, UTAH.

Without obligating me in any way please send me your sixteen-page booklet which explains in detail the plan of The Inter-Mountain Rural Credit Association and tells how I can become a member and enjoy the benefits of this co-operative organization of Utah and Idaho.

Name.....

Address.....

## The Inter-Mountain Rural Credit Association

606 McINTYRE BUILDING.

SALT LAKE CITY, UTAH.





Combined with the  
Deseret Farmer and Rocky Mountain Farming.  
Established 1904

Entered as second-class matter in the postoffice at  
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#### OFFICES

All mail should be addressed to the Utah Farmer  
Lehi, Utah, Kirkham Building.  
Our office at Salt Lake City, Utah,  
is at 712 McIntyre Building.



New York Office 5th Ave. Bldg.  
S. E. LEITH, Mgr

Chicago Office Steger Bld.  
T. B. COSTELLO, Mgr.

St. Louis Globe-Dem. Bldg.  
A. C. COUR, Mgr

**Change in Address**—When ordering a change in the address, subscribers should be sure to give their former as well as their present address, otherwise the address cannot be changed. This is a matter of importance to you and to us.

**Advertising Rates**—The advertising rates will be sent upon application.

#### OFFICIAL ORGAN

Utah Horticultural Society, Utah State Dairymen's Association, Utah State Bee Keepers' Association, Bear River Valley Farmers' Protective and Commercial Association, Agricultural College Extension Department and Utah State Fair Association, Utah-Idaho Millers' and Grain Dealers' Association, Utah Fruit Growers Association.

#### OUR GUARANTEE

We guarantee every subscriber against loss thru dishonesty or attempted swindle by any advertiser in this publication. We do not attempt, however, to adjust trifling differences between the subscribers and honest, responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within thirty days from date of the transaction, and the subscriber must have mentioned Utah Farmer when writing the advertiser.

The spirit of Christmas should awaken so much tenderness and fellow feeling toward all humanity in each of us that all might be happy at this season of the year. A kind word is alright, but do more, do some act of kindness that will make some one else happy. It can not bring you the real pleasure unless you make some sacrifice to do it. In making others happy you are really happy yourself. It is a season of giving and this should be done in wisdom. Do not buy costly presents when you cannot afford them. It is the spirit you manifest towards your friends that counts most.

#### FARM MACHINERY.

Most farm machinery does not wear out. It rusts out. When it wears out through ordinary use its value is changed into the product handled by that machine. It has accomplished its end and therefore been productive. When it rusts out, its value likewise disappears but without a return. It is lost, wasted. Winter is just setting in. Have you taken time to shelter all the machinery? Have you oiled what you can to protect it against rust? Are all canvasses stored safely away?

Machines of today are too expensive to deteriorate in value because of carelessness. Big wages can be earned by time spent in taking precaution against such waste.

Shelter the machinery.

#### DO YOUR OWN THINKING.

It pays to think. Thinking stands between success and failure. In days of old when the farmer

produced just what he consumed the demand for sound thinking was not so urgent. He was not forced to test his brain ability with his fellow's. But the times of old have changed. They are no more. On every hand is the farmer required to meet problems and solve them. As these new problems have come some farmers have failed to realize the necessity of brains to solve them. Consequently others have made the solution at the expense of the farmer. No man solves your problems for nothing. It is against our economic system. Energy, properly mixed with brains and thereby guided toward a goal, is productive. Unguided, it loses its force and fails. The time has come when constant thinking determines success from failure. No one can idly sit by and expect the world to shape its economic system to make his labor effective. The farmer must plan, then produce, then turn that product to a gainful end. This takes forethought, it takes the best of which you are capable. The thinking must come from you. You are amid ten thousand problems which might spell ruin if unobserved, or success if properly controlled. The future farmer must use his brains.

#### TEAM WORK WITH YOUR BOYS.

There are few farmers who have not learned that it costs money to educate children. From the cradle to maturity expenses seem to come from every hand. This is not so serious, if after such expenditure the child is able to make a good honest livelihood without dependence. Although it is true that schools can do much to furnish the proper information and training for the child's development, yet they are very artificial and only are provided to aid the home in its duty of rearing the child. The boy on the farm who can be given some specific duty and can be taught the economic value of work and thrift is taught a lesson it will take many days to learn in school. Why not give the boy a hog or two, or possibly a pen of poultry and then allow him to care for them with the prospect of a profit. It is educational for the boy. It encourages his interest in the farm. It stimulates thrift. It may be in his school he has the opportunity of studying the problem with which he is working. In such a way will the school and real life be connected and thereby made practical. Team work with the boy. Give him a chance. It may be he will demonstrate to you, as some boys have demonstrated to their fathers, that the old way is imperfect, that a new way is superior. The boys and girls of the farm is its best crop. See to it that you offer them the best opportunities for advancement. The boy will be anxious to accept of your offer. Try him.

#### MARKETING.

There was held in Chicago last week a convention, by men coming from forty different states and some foreign countries, to discuss the important questions of Marketing and Farm Credits. All will agree that they are important and as farmers we must do something to help solve these problems, not let the other fellow do it for us and to his liking and benefit, but we should take part and help meet these questions and work them out for our self and benefit. Better organization on the part of the farmers is what we need. We must get together, eliminate the waste, and learn the strictest economy if we are to be very successful. In our marketing we must have a standard of grade and quality. Only this

week an apple buyer in Salt Lake told us that he had bought a car of apples of supposed standard and quality and upon examination found "they were not graded at all." This condition must be corrected. It is just as true of eggs and potatoes and other farm products as it is of apples. The buyer wants to know what he is getting and seller should be absolutely honest in making a statement as to what he is selling.

When we get together and learn some of these things we will have taken a long step towards better prices for our farm products.

#### THE HORTICULTURAL CONVENTIONS.

At the meetings next week, to be held at Provo and Ogden, the Horticulturists of the state have an opportunity to get together and discuss some of the important problems which confront them.

A number of suggestions have already been made as to how we can overcome some of them. But the trouble is, so few of the men who should be interested attend these meetings. Why don't you go, and study these marketing problems? We have the best kind of fruit, but we do not properly assort and pack all of it. We could improve as to cultivating, spraying, pruning and irrigating.

We believe in the fruit business and think our horticulturists are big enough men to handle every phase of it, if they will get together. We want more cannaries, with men of experience to run them. We should have evaporation plants and other ways to help take care of our fruit crop. Much fruit is a total loss because it can not be handled under our present system at the right time.

We can not urge too strongly for every man who is interested in the fruit business to attend one of these conventions. The spirit of the day is co-operation—get together—and this is what the fruit men and those interested with them such as the railroad, the sugar companies, bankers and cannery should do.

#### RAISE MORE GOOD HEIFER CALVES.

Can you tell me of a much greater problem for the dairyman, or for the live stock man, than the raising of good heifer calves? A good and sufficient number must be raised to replenish the herd with good cows. The past few years have brought many changes, prices are higher and the demand for high class cows is much greater. Where can this need be supplied? If we want more dairy-bred heifers, the logical and best place to raise them is on the dairy farm. If the cattle man wants to improve his stock there is no better way, outside of the sire, than to select the best heifer calves and raise them on the farm. The increased cost of feeds and labor, suggest that only the best calves be kept. We should keep the best and with the use of a good sire it will not be long until we will have a desirable herd of cows, this is true if we are selecting for dairy purposes or for beef.

Feeding and care are important factors with a calf or young heifer, keep them growing. Do not over feed with any particular kind of food just because you have plenty of it but study the needs of the growing calf. A great deal of information is available to the one who does not know these details. If you do not have it let us know for we can help you. If you have any questions don't be afraid to ask them. If you want an article along any line of this work just say the word.



# Preparation of Poultry for Exhibition For the Fall and Winter Shows

Edwin Brackett.

If exhibitors of poultry would give as much attention to the preparation of their birds for the coming shows as the horse and cow owner does to his respective breed, poultry shows would be a better success and there would be more blue ribbons and less kicks for the judge. The same man who shows cattle and poultry, will give the cow four or five times as much attention as the fowl—because the fowl is so much smaller than the cow—hence the breeder limits his attention. It is possible for inferior birds to win rightfully over superior birds that are not so well cared for or not in as good condition. If the really best bird should have a couple of broken wing feathers or be a little off in weight, her death knell is sounded and it is often possible for the bird with the clean leg, smooth comb, correct weight and spotless plumage, to race to the goal ahead of her more deserving competitor. An expert can always pick a bird out of the yard and no matter how perfect her condition may seem to be; there is room for improvement.

Most exhibitors make the fatal mistake of beginning too late on their specimens. After the bird has moulted in the fall she should not be exposed to the rain or sun. By this I do not mean that it will spool a fowl to ever let the sun shine on her, or if she ever gets under a falling drop of water she is ruined; but, she should be kept in a yard that affords plenty of shade and will shelter her when it rains. A bird will seldom ever stay in the rain or sun long enough to damage her plumage. The feather will lose its gloss and lustre when exposed to the weather and a hot sun will always fade a buff or particolored fowl.

In selecting your exhibition fowls, never take one that shows the least symptoms of disease. Do not think you can cure it and make your bird win anyway, for confinement in the show room always has a tendency to aggravate illness and your attempts, no matter how strenuous, will be in vain. Learn first what the standard weight of your fowl is and let your selections be as near that as possible.

After you have selected your show birds—which should be done very carefully and thoughtfully—the next proposition is to prepare them. Presuming that the feathers have been cared for as above stated, since the bird has moulted; the next thing to get right is their weight. If the bird is a bantam, they will likely be too big, while a large bird will probably be small. Even if your bantam is smaller than the standard requires, or your American or Asiatic is larger, I will always advise having a bird as near the standard as possible as a premium is often decided by this. In a score card show, when two fowls tie for a prize, the ribbon is always awarded to the specimen nearest the standard weight. Then it gives you a habit of close pursuit of the standard, which is very essential, especially to your exhibitors. When birds are too small they should be fed up—but do not feed too ex-

cessively on meat as it will cause an unusual growth and loping of comb, unless your specimen should be a Mediterranean hen, in which case not much damage could result. On the other hand, a bantam should be "lowered" to her standard, but, if she appears before the judge too poor, it will be disadvantageous to her. Too many people look too lightly on the weight question which is to their disadvantage.

Before cooping your bird for exhibition it is well to go over them and see if there is any disqualifications that you can distinguish. Several birds are entered in shows and when approached by the judge will be disqualified on matters that the exhibitor could have easily seen, had he looked. Should an exhibitor be contemplating his first show, he should become familiar with all disqualifications and look his birds over thoroughly before entering. A feather or stub on the leg of a clean legged bird can sometimes be plucked and save a fowl; that is often overlooked. When inspecting your birds, always pluck a broken feather or a black feather in a white bird or vice versa. When cooping the fowl for preparation, the vital mistake is often made by putting them in too small coops. These should be at least 30 x 30 x 25 and if you could add 5 to the 25 it will still be better. Never crowd your birds too much as this results in feathers being broken and combs torn and such accidents as would naturally occur in a crowded condition. Always keep your coop clean as this is the time when your feathers must not be stained. If your birds are ailed with bad scaly legs, they should be treated at once. A simple application of coal oil will cure, but lard and vaseline are better.

Another important feature in exhibition of poultry is to have your fowl trained how to act. Any bird that has been shown to any extent by an experienced exhibitor, when taken out of his coop will pose in an aristocratic air; the male bird will probably crow and strut around as if he owned the whole show, while the female will pose as a beautiful model would before a painter or sculptor. This is accomplished by the treatment the exhibitor bestows on his birds. Never speak harshly to them—never create excitement around them and handle them often and as quietly as possible. Teach them to stand erect by feeding them from the top of the coop. Nothing will give a bird the black eye as quick in a judges opinion as to have them fly against the coop when approached or huddle up as if frightened to death. Neither is the judge able to ascertain their shape when in this position. This feat is the hardest to accomplish with the Mediterranean class, but it can be done and if the exhibitor desires to be successful it should be done. It also must be done in time as he who waits until the last minute will be apt to see his competitors win the prize.

The next ceremony on the program is the cleaning of the plumage. When feathers are stained with paint or juice from tall weeds which they have been allowed to run through, it may

be removed by saturating a cloth with benzine and rubbing. Be sure to use a clean portion of the cloth with each stroke. Some exhibitors wash only white birds, but I have better success when I wash all colors—not excepting black. If washing is not properly done, even a white bird will stand a better show not washed. Should you want to show a buff, black or particolored fowl with out washing, their looks can be improved upon by taking a white cloth, and after holding it over the steam of boiling water, go over all the surface plumage. If you wish to add lustre or sheen to the plumage of your fowl, it may be done by feeding red carbonate of iron. This is fed: one teaspoonful in a mash feed for a dozen, fed three or four times a week. This should never be given white birds and is not best for light buffs. Some say that beef tallow fed to fowls will add gloss. Linseed meal, oil meal, oil cake, sunflower seed and other like feeds will grow feathers rapidly. However, I think I am frank in saying that if birds was properly fed and cared for during the entire twelve months; the above feeds are unnecessary.

In washing—three wash tubs should be used. In the first, have your water a little warmer than luke-warm, and suds may be used of Ivory soap. Never use a brush of any kind, save on the feet and legs. With a soft sponge, wash your fowl as clean as possible, being careful never to rub the feathers the wrong way. After the bird is thoroughly washed, place in the second tub, which is to be luke-warm and free from soap. In this tub you rinse your bird well, being careful to get out all soap, for if you do not the feathers will stick together and not be fluffy as in their natural state. After you are sure that each individual feather is free from soap, your bird is ready for the third and last tub of water which is to be cooler than the other two and to contain blueing enough for white cloths. Thoroughly rinse the fowl in this and then after squeezing all water out of the feathers possible, you may dry with towels, being careful that you do not rub "against" the feathers or in the wrong way. This completes your washing process and your bird is to be placed in a strictly clean coop near a fire where the warmth can yet to the plumage and yet not be too strong for the bird. The feathers will dry and attain a natural condition in a few hours. Be sure to keep the straw in the bottom of the coop perfectly clean and dry from now on.

Your bird is now ready for the show room if her comb is not too pale or too rough. A little sweet oil will smooth it and brighten it up a little. Some use a solution of two parts of alcohol with one of glycerine to which is added three drops of oil of sassafras to each teaspoonful of the mixture. From two to four applications a day will be enough. This solution will bring the comb back to life when nearly frozen, and vaseline is good for this too. It is also supposed that you have the birds legs washed good with soap and water and the dirt washed good from under the scales with a good brush.

Now is the time to renew your subscription to the Utah Farmer.



## HEWLETT'S LUNETTA

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PURITY-QUALITY  
AND STRENGTH.

The popular baking  
powder at a popular  
price—25c a pound.

Your dealer  
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215 acres, one mile from railroad station and beet dump. Full water right in the Bear River Canal for 50 acres. Balance first class dry farm. Good house, sheds, etc. Hog pasture and 1000 head of hogs on the place at present. A great bargain at \$50 per acre. Will take some property as part payment. Balance on good terms.

80 acres near Elwood station. Has been in alfalfa for 8 years. Owner is offered \$16 per acre cash rent per year. Will sell for \$130 per acre on good terms. Full water right. A very splendid buy for a man who wants an income producing farm.

40 acres, near Tremonton. Full water right, land is leveled, plowed and in perfect condition. Only \$115 per acre on ten years time.

2½ acres on 15th South and 4th East.

First class land and good water right. Only \$900 on very good terms. Only \$90 cash down.

6½ acres near 15th South and 3rd East. With a good substantial 7-room house, 2 large chicken houses, good place for chickens and geese. Five flowing wells on the property. Shade trees and fruit trees. Only \$3100. One-tenth down and balance on ten annual installments.

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Catalogue for stamp.

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Williamsport Ohio

WANTED—Second hand pumping  
plant, deep well, 100 feet, irrigating.

J. W. COLEMAN

Victorville California



## THE HOME

### SEWING—LESSON XII.

#### Dresses.

Materials and Trimmings—Cutting—Putting Together.

**The Pattern**—The pattern should be bought according to the age, unless the child unusually large or small for her age, in which case it should be bought by the bust measure. If necessary, the length of the waist, sleeves or skirt should be altered according to the instructions given on the pattern envelope. The method of altering the length of a pattern is always the same. A plait is laid across each piece to shorten it, and in a skirt, and sometimes in a sleeve, the lower edge is also turned up. To lengthen it, the pattern is slashed across and the pieces separated. In a skirt pattern, the pieces are not only slashed, but extra length is also allowed on the lower edge in cutting. The place where these alterations are made depends on the style of the garment and is always explained in the instructions on the pattern envelope.

The pattern instructions should be read carefully with the illustration on the envelope so that you will know the meaning and use of all perforations and notches.

**Materials**—For school and play dresses the best materials are gingham chambray, percale, galatea, linen, pique, cotton rep and poplin. They can be trimmed with collars, cuffs, belts and bias bands of a contrasting color or material, with pipings, buttonhole scalloping, embroidery insertion and edging, and hand-embroidery and scalloping.

For lingerie dresses there are fine dimity and lawn, cotton crepe, voile, marquisette, dotted swiss, mull and batiste. The prettiest trimmings are hand-embroidery, lace or embroidery insertion and edging, medallions, tucking and hemstitching.

The table of quantities on the pattern envelope will tell just how much material and trimming will be required in each size.

**Cutting**—Cut the sleeve edge of your material, spread your material smoothly on the cutting-table and place your pattern on it according to the pattern instructions. Be sure that you know which pieces should be cut with an edge on a fold, which pieces should be cut double (like sleeves), which should only be cut once (like a collar).

Pin the pattern on and cut the dress out carefully. Clip all the notches and mark the working perforations with tailors' tacks. If there are several different kinds of perforations, mark each kind with a different colored thread so that you will not mix them up when you work on the dress.

**The Seams**—In light-weight gingham, etc., the seams should be finished as French seams, and should therefore be pinned and basted on the right side of the dress. In heavy cotton and linen materials, the seams should be bound or overcast and should be pinned and basted on the wrong side of the dress. In lingerie dresses, the seams should either be basted on the right side for French seams or on the wrong side for veining or narrow seam beading, as it is

called. Pin the seam edges together with the notches matching. Baste all outlet seams through the outlet perforations. All the other seams should be basted three-eighths of an inch from the edge.

**Trying On**—Try the dress on with the edges meeting or lapping, according to the pattern instructions. It should fit smoothly but easily at every point and should not be snug anywhere. You should have perfect freedom to breathe deeply and to play and run as hard as you like. Remember the sewing the seams will make the dress a little smaller than it is with these loose bastings, and that washing will make it shrink a little. So don't fit it too tight.

If any alterations are necessary, pin them in, take the dress off and baste the alterations. Try it on again to be sure that it is just right. Then sew the seams with fine, even running stitches.

#### Finishing a Gingham Dress

**Finishing Seams**—In gingham and other light-weight cotton materials, the seams should be finished as French seams. In heavy cotton materials, the seam edges should be sewed with close overcasting stitches to prevent the edges from fraying; or they should be bound.

**Binding a Seam**—Stitch the seam and press it open. After pressing, the seam will have spread at the edges, especially if it is curved, and the binding can be applied without any chance of its pulling later.

Cut a bias strip of lawn half an inch wider than the seam. Fold the strip through the center, turn in each edge a quarter of an inch and crease it. Baste the binding over the edge of the seam with the fold edges of the binding even, basting through both fold edges of the binding and the seam edges. Sew it just outside the basting with running stitches. Keep the turned edges of the binding even on both sides of the seam edge.

**The Closing**—The buttonhole may be made through the waist or in a fly set under the overlapping edge.

**The Placket**—The placket opening should be finished with a continuous lap.

**Joining the Waist and Skirt**—The waist and skirt should be put together according to the pattern instructions, making the seam come on the inside of the dress. The seam is finished with a facing.

**The Sleeves**—The sleeves should be put together and the edges should either be finished with a French seam or the seam edges should be bound or overcast.

If wristbands are used, they should be made and put on the sleeves like the wristband on the nightgown.

In light-weight cotton materials, the sleeves can be set in with French seams. In heavy cotton or linen materials, the seams should be set in with an ordinary seam and the seam edges should be bound.

**The Collar**—Most tub dresses are made with flat collars. If the collar is double, it should be made and put on the dress just like the nightgown collar. If the collar is single, the neck seam should be finished with a facing.



## A GOOD LAMP BURNS ITS OWN SMOKE

**THE Rayo** Lamp mixes air and oil in just the right proportions so that you get a clear, bright, light without a trace of smell or smoke.

RAYO lamps are gracefully designed and built to last. They are easy to clean and easy to rewick. Dealers everywhere carry the RAYO.

### THE CONTINENTAL OIL COMPANY

(Incorporated in Colorado)

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## WE MAKE

Farm and Ranch Loans  
in Utah, Idaho,  
Wyoming, Oregon and  
Colorado.

### MILLER & VIELE

303-7 Kearns Bldg.  
Salt Lake City.

**The Hem**—The depth of the hem is given on the pattern envelope. It should be turned up on the inside of the skirt and hemmed with neat hemming stitches.

—o—

"I done heard it read in de paper," said Uncle Raspberry, "dat some o' dese here flyin'-machine gemmen says a man kin do anything a bird kin."

"That's what they say," said Aunt Chole.

"Well, when any o' 'em sees a man set fas' asleep, holdin' on to a tree branch wif his feet, I sho' wishes dey'd call me to have a look."

—o—

Read the advertisements in this issue of the Farmer.

## FOR HOME

For your own table, in your own kitchen, use those products that are made at home—you have a double benefit, for the best quality is secured and your money stays at home to come back to you through trade channels.

**USE TABLE AND PRESERVING SUGAR**

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ALL FEATURE ACTS

THE BIGGEST VALUE IN  
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10 AND 20 CENTS.

121 East 2nd South  
SALT LAKE CITY, UTAH.



## Short-Weights and Short-Measures

Heber C. Smith, Commissioner for  
State of Utah.

Short-weighing and short-measuring certainly have existed to an alarming extent in this country, and while we are figuring on the high cost of living, let us not forget that this subject has its place in such consideration. There are many people in our communities who are considered respectable, who would not think of stealing money from their friends or neighbors, but who would stoop to the practice of short-weighing and short-measuring them in selling commodities, which certainly is petty larceny. Their selfish natures frequently blind them morally. They seldom realize that their little acts of stealing contribute just that much to the high cost of living, for the amount that is not delivered in commodities through short-weighing and short-measuring has been paid for, and considered in the aggregate. The amount that is frequently not delivered because of this evil, amounts to considerable. Pounds and ounces of any commodity have their money value, and any stealing, either through care-

lessness or deliberate thievery in pounds and ounces, is the same as stealing its equivalent in money. The Commercial Golden Rule should be: "Weigh and Measure unto others, as you would that others weigh and measure unto you."

Have you ever considered that the National and State Pure Food and Drugs Laws were enacted because the consumers began to wake up and see how generally they were at the mercy of fraud and deception, a fraud that even threatened their very health, as well as the palming off upon them as the genuine article, a cheap, inferior and sometimes worthless article? It all originated out of this selfish nature of man, that in some predominated to the extent that they measured and weighed unto others in a manner that they took great care others would not weigh and measure unto them. Are these petty thieves, who belong to as large a gang of robbers as ever lived, still with us? Yes! but the law has compelled them, or rather they have been compelled to resort to ingenious tricks and trade wrinkles to deceive the consumer. They have not repented, but have gone under cover. If the names of some who have heretofore been guilty of these frauds and deceptions were made known in this country today, libel proceedings would no doubt be instituted, and a claim of alibi made.

In many instances, these former vendors of cheap, inferior or mislabeled foods, and many allies who had this selfishness well developed, began to manifest themselves in a new guise, made convenient through our modern commercial practice of buying and selling in cartons, cases, cans, barrels, boxes, etc., etc., instead of the former method of buying almost exclusively in bulk. In this way, they could short-weigh and short-measure without hinderance, because of inadequate laws.

To counteract this somewhat pessimistic picture, it is only just to say that the majority of the business men and concerns in this country remained true, although some were a little scorched through competition, these emerged from the heap of competition and demanded that they be rescued from this condition by adequate law, and through pressure, proper appeal to Congress and the various State governments, the net weight law was passed, compelling manufacturing concerns to place in plain English and conspicuously, the net weight on all food packages. This Federal Law was passed March 3rd, 1913, and is to be enforced with vigor. This State had a net weight law, or rather a law compelling manufacturers to mark the net weight on containers, which law was passed at the 1913 session of the Legislature, and was not very vigorously enforced, because of the extended time given under the Federal Act. The Federal Act is now in force, and we shall try and keep pace with its enforcement in this state.

To assist in the enforcement of this splendid net weight law, there was enacted at the last session of the Legislature, a Weights and Measures Law, repealing the old and anti-dated law by that name. The provisions of

the old law were totally inadequate to meet conditions that existed. For instance: The Weights and Measures Officials could find a weight or measure, or weighing or measuring device, impossible of weighing correctly. They were permitted to put a tag on such, stating that it was incorrect, but the owners could not be compelled to have it repaired. We found scales of a computing nature on the market, so fixed that a commodity could be purchased for twenty cents per pound and sold for twenty cents per pound, with a twenty per cent profit made on the transaction, and still this scale could not be confiscated. Under our new law, however, all these false devices, sold and used for fraud and deception, can be and are confiscated by the State. This new law provides that all commodities must be sold on a basis of weight and that weight shall be the net weight. Sacks, bags, buckets, boxes, wrappers, cartons, etc., are not to be considered in the weight. A brief review of the law is as follows:

1. All foods in package form, or in package, carton, case, can barrel, phial or receptacles, must be marked in plain English and conspicuously, with the net weight, liquid measure or numerical count.

2. All bread, whether wrapped or not, must be labeled as to net weight.

3. Small berries must be sold in pint or quart containers, having a capacity of 33.6 cubic inches and 67.2 cubic inches, and containing 10.5 ounces and 21 ounces respectively.

4. Butter must be sold in the following sized bricks: one-quarter pound, one-half pound, one and one-half pounds, of multiples of one pound.

5. Commodities usually sold by the head or bunch are not restricted under the law.

6. In all goods sold on a basis of net weight, it shall be unlawful to employ any other weight. That is, the carton, case, can, barrel, box, sack, phial or receptacles cannot be considered a part of the purchased weight of the commodity sold.

Furthermore, the law referred to provides that all scales, weights, or containers used in this State shall be accurate and correct, or they shall be confiscated by the State. This provision is made so that improper weights, measures, weighing or measuring devices that are not susceptible of repair can be taken off the market.

### A Few "Don'ts."

Don't buy by the chunk or roll, the box, barrel, bottle or receptacle, unless the contents are stated in terms of net weight.

Don't buy by the chunk or roll, the 25 cents worth. Be definite, and ask in terms of weight, which weight has its money value.

Don't buy the second time from one who wilfully cheats you, for he will do it again if you are not looking.

Don't allow a person to charge you the weight of the container in the net contents of the commodity, but let the containers be charged in some other manner.

If you need the services of the Weights and Measures Department, let your wants be known.

Training is everything. The peach was once a bitter-almond; cauliflower is nothing more than cabbage with a college education.—Mark Twain.

## As White as Snow; As Pure as Western Air

And as sweet and as perfectly adapted to all household requirements as any sugar in the world. Utah-Idaho Sugar has reached a point as near perfection as is possible.

Thousands of housewives who have learned the superiority of Utah-Idaho Sugar for making jelly, cakes and pastry; preserving, cooking, etc., demand Utah-Idaho Sugar from their dealers, because of its purity and sweetness. Ideal conditions surround its production in this wonderful mountain climate.

The convincing evidence of its purity is proclaimed by its glistening whiteness. Don't accept any other than Utah-Idaho Sugar. If you are not already using it, give it a trial—put it to any test, the highest quality sugar should stand—then you will prove its worth.



## Your Farm Equipment

should include "Never-Rip" work clothes.

—They'll give lasting service and pay for themselves many times over, in lightened labor, clothing saved and in service given.

—For that big farm or for the little backyard garden this spring, there's no assistant more able and useful than

### SCOWCROFT NEVER-RIP

—1200 farmers and working-men ask for them by name every day—

—because they know that entire satisfaction is guaranteed when the label says "NEVER-RIP."

### SHIP OF THE DESERT

"Johnny," said the teacher, "what is a dromedary?"

Johnny didn't know, but Ralph did. "I know," he said proudly. "A dromedary is a two-masted camel," —Christian Register.



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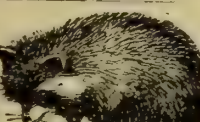
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## ORCHARD AND GARDEN

### AUTUMN ORCHARD WORK.

(Continued from last issue)

#### Hints for Effective Work.

Begin operations at the base of the tree and work upward, otherwise a lot of time and careful work may be wasted on the upper part of a branch which it is later found necessary to remove, or body blight or even collar blight found later on the tree may cause it to be condemned. In some cases there is a limit to the amount of work which the grower is willing to do to save a tree. The blight should be removed even if it necessitates condemning the tree and rooting it out. A tree partly injured by collar blight may be cleaned up and saved. This often requires digging the dirt away and working partly underground. It is necessary, however, to follow the margin of the disease, even if it carries you into the ground, just as if you were tracing the boundaries of an island. It is usually best to condemn a tree girdled by collar blight. It is possible, however, after doing thorough work of eradication with a rather mild case of collar blight, to bridge graft and thus save the tree by the same process used in bridge grafting a tree girdled by mice or other animals.

Collar blight can best be detected in the autumn, just before the pear or apple trees shed their leaves. This and similar injuries to the collar of a tree will cause the leaves to yellow and assume bronze or autumn colors and even drop, while those on the normal, healthy trees are still green. Other troubles, such as injuries by mice, frost collar girdle, and fungous root rot cause similar symptoms, but these symptoms should lead to an inspection of the collar.

To inspect the collar of a tree or any doubtful point on the body or on large limbs, dig out with a carpenter's gouge or a sharp knife a small piece of the outer bark, exposing an area of the fleshy bark the size of one's thumb nail. The cut should not be made through to the cambium and will do no injury if the bark is all right at that point. Always do this with a disinfectant in hand and promptly disinfect the cut, otherwise you may inoculate the blight or at least give an opportunity for inoculation. Keep the knife or gouge continually disinfected during this inspection.

Do not be deceived by the normal rough-bark formation, which consists of the outer layers of bark which have died naturally. Fruit trees like other trees, keep their bark smooth while young and vigorous. As they get older the outer layers begin to die, being replaced by vigorous young bark underneath. This process starts mainly at the base of the tree and works upward, the oldest bark dying first. It also begins in spots on the branches, especially at the bases of fruit spurs or small twigs, and finally covers all the other branches of the tree. It is natural to the tree and needs no attention except to distinguish it from the true blighted areas.

In working out bad cases of blight, particularly on the collars, bodies, or larger branches where there is considerable live blight in the thick fleshy bark, it is a good plan, after do-

ing the work thoroughly, to mark such a case by tying a strip of cotton cloth around the body or branch to distinguish it from the nonvirulent cases, then three or four days to a week later with a gouge or sharp knife retrim the margins to make sure that you worked beyond the blight at all points. The bark will discolor naturally, so that this blight can not be detected without retrimming. If any of the blight were left it is thus given an opportunity to discolor further the bark and show itself. This works better in warm weather than in cold weather.

Having cleaned up the blight thoroughly in the fall, when dealing with bad outbreaks it is a good plan to go over the orchard tree by tree and inspect in early spring when the buds are swelling, but well ahead of the blossoming period, to make sure that no cases escaped. A bit of gummy exudate will, of course, immediately lead to examination with a knife and gouge. Carry the kit of tools and disinfect and be prepared for further work on such cases. Occasionally a suspicious looking case may be partially or completely retrimmed, as above suggested.

#### Painting Wounds.

In the autumn, after the wounds or eradication scars are made, disinfected, and perhaps reinspected when deemed necessary, the exposed area of wood, especially if 1 inch or more in diameter, should be painted for protection, as in case of pruning and other wounds. Since many of these areas may be large, it is important to give this wound treatment. Various materials are available, such as white-lead paint, liquid grafting wax, coal tar, or a mixture of three-fourths to two-thirds coal tar and one-fourth to one-third creosote oil, all to be applied with a stiff brush. Liquid grafting wax is somewhat expensive and often requires warming, so that it is not usually preferred. Coal tar, while cheap, requires warming, and is therefore difficult to apply. The department experts have used for this purpose mainly white-lead paint made rather thick, (and preferably given a second coat) or the coal-tar creosote mixture.

White-lead paint has some advantages. It is readily obtained and applied, and if any of the gummy exudate, which is more or less reddish or brownish in color, flows from an imperfectly worked case, it is readily detected on the white surface. On the other hand, this paint has proven a disappointment to the department and experiment station pathologists in that it frequently has not preserved the wood from decay. It is rather too mild a disinfectant. The wood cracks, lets in water and fungus spores, and frequently after three or four years and before large wounds have healed wood-rot fungi have entered and decayed the wood under the paint. Even though applied to the wounds when they are dry, the sap pressure, even in the autumn, often lifts the paint from the surface of the wound, particularly in the case of scars on the ends of the branches.

The coal-tar creosote-oil mixture is not open to these objections and for these reasons is rather preferable. It

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is used very commonly and successfully on shade trees, and while there is still some question about its use on fruit trees, it has given good results on pears and apples, even though the healing from the margin does not proceed quite as rapidly and smoothly as with the lead paint. The coal tar creosote-oil mixture is a powerful disinfectant, penetrates the wood to some extent, and is both a disinfectant and a waterproof coating. If made too thin it penetrates rather too deeply and does not answer fully for waterproofing. If made too thick it is not convenient to apply. In cold weather slight warming is sometimes useful, but with a stiff brush under ordinary conditions it works well. It has a tendency to kill the wood under the cambium slightly and sometimes to kill back a little, but it does not kill the edges of the bark to any serious extent. This mixture is best applied immediately after making the cut, or at any rate as soon as possible after inspecting the wounds. It sticks well even though the cut surface on the end of a branch is still somewhat moist when it is applied.

Pear blight eradication is quite a careful piece of work. It requires close attention on the part of the orchardist or careful training of the help who may be engaged in it. Remember that thoroughness is essential for success. It is not necessary to determine in all cases whether the blight is alive or dead on the lower margin, although somewhat helpful as a guide in determining how low to go. In actual practice it is better to cut out all the dead limbs and all the blight anyhow, regardless of whether it is a dead case or not.

The blight eradication should always precede the pruning. Other pruning for shaping up the trees may be done, if preferred, before leaving the trees, or may be postponed until some convenient time later, but of course, before the buds push in the spring.

#### DIVERSITY OF FARM

##### ENTERPRISES.

In most cases where studies on the profits in farming have been made, particularly in our oldest agricultural districts, such studies indicate that the most successful farms are those which have from two to four major sources of income; i. e., they have a well balanced and diversified business. In certain instances it may pay better to have only one enterprise, but usually when one crop pays much better than all others the production of it increases rapidly and soon the price falls to the point where other crops or products are equally as profitable. Diversified farming is often confused with farming where there is a little of everything and not much of anything. Either extreme lessens the chances of success. When the price of certain crops is very low then live stock usually become desirable. However, if the returns per animal are poor cash crops even at a low price are essential. A well-balanced business insures against losses and provides a much better utilization of the labor and equipment.

#### TRACK WALKER

Bing—Borely is going to take up railroad.

Bang—So many nice girls have told him to make tracks that I don't wonder at it.—Town Topics.

#### MUSIC IN THE HOME.

Alexander Lofgreen.

Let me emphasize at this time of the year one thing that I am in love with and that is music. Vocal, instrumental any kind so it is good music. Boys and girls like it. Have you noticed how the young people will gather at a home where there is plenty of music? If there is music in the home it is a big factor in keeping the young people at home.

"Music hath charms to soothe the savage breast, to soften rocks, or bend a knotted oak."

The poet, Congreve, waxed a bit figurative when he said this, but he was simply paying tribute to the really remarkable influence of music.

It is an actual fact that music will lessen physical fatigue, by relieving the nervous tension. Its influence on the mind is likewise phenomenal, for it turns the current of thought into a new and more pleasant channel.

A case of headache, or languor, or the blues, in many people, will yield instantly to lively music, which supplants the depressing mental state and permits the natural optimism to resume its sway.

Music is not alone a physical and mental inspiration; it is a "home-maker" as well.

A home is a center about which the members of the family rotate. To strengthen the "attraction" of the center, we must have things in it that attract every member of the family; in other words, that have a common interest.

Probably no single material thing is stronger in common interest than music. Its influence is felt keenly by every member of the family, from grandmother down to the newest baby.

This is why a "music box" in the home is so important. By "music box" we mean anything that will make music.

Singing in the home has apparently lost some of its old time popularity, but it cannot be said to be the fault of the music. Old fashioned singing needs to be revived. It is a mistake to neglect this delightful pastime and the more of it we can inject into the confines of the home the better. Let parents lead in encouraging and providing more music within the home. Singing is good for anyone, whether or not he be blessed with musical talent. Even if we cannot sing well, there is a great deal to be gained in singing as well as we can.

One does not need to spend great sums of money in order to provide good music in the home. Be just as careful in your buying of piano or talking machine as you would in spending money for other things. What is a home with out some kind of music? Let the young people sing and play, join with them or partake of the spirit of music—harmony—love at home, and the boys and girls will be at home rather than finding some other kind of past time at some other place.

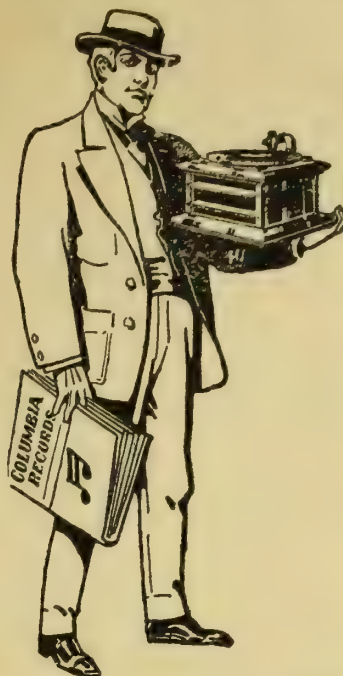
#### POKER PLAYER'S PIE

"Does your husband play cards for money,"

"No," replied young Mrs. Torkins thoughtfully; "I don't think Charley plays for money. But all the people who play with him do."—Washington Star.

"Utah's Most Popular Music House"

No time to lose if you want your **GRAFONOLA** for Christmas! Order NOW—We ship same day your order is received and we pre-pay shipping charges from Salt Lake to your railroad station.



This man carries the "ECLIPSE"—the best \$25 instrument known to-day. Made in mahogany or quartered golden oak. Size 15½ inches wide by 15½ inches deep.

### "The \$25 instrument with the \$200 TONE"

You will not believe a \$25 instrument could have such a full, round, rich and natural tone until you hear it yourself. It brings you the real voice of the singer—the real music of the band or orchestra.

Price of the GRAFONOLA.....\$25.00  
12 double-disc Records (Music on both sides) .....7.80

Terms—\$10 Cash—\$5 a month. \$32.80

*Daynes-Beebe Music Co.*  
ESTABLISHED 1860  
45 MAIN ST. SALT LAKE CITY, UTAH  
"OLDER THAN THE STATE OF UTAH"

"This dog of ours," said Mrs. Jones to the Sabbath dinner guest "is a most peculiar animal. He runs away very often and stays for days—but he always comes home on Sunday."

"Why is that? Why does he choose Sunday to return?" asked the guest.

"I really don't know," smiled Mrs. Jones, tenderly stroking the dog's sleek brown head. "Some strange canine intuition, I suppose."

"Canine nuthin'," sniffed little Johnny Jones. "I 'spect he knows that Sunday's the on'y day we have a decent meal."—Judge.

#### PASTURE AND FEEDS FOR HOGS. (Continued from page 5)

12. Duroc Jersey Berkshire cross makes a very good hog, though you frequently get the mixed color which is not liked by buyers. The Tamworth Duroc Jersey cross will give you a red pig, shorter than the Tamworth, and in fact a pretty good type all through.

13. (Answered above).

14. Whether it would pay to run 100 head of ewes in connection with the hogs will depend very largely upon your cropping system and other facilities.

15. Field peas cut at the right time will make practically as good ruffage as alfalfa for ewes and lambs. As mentioned above the yield per acre is usually much smaller in case of the peas.

DELICIOUSLY  
DIFFERENT

FRESH  
ROASTED

STEEL  
CUT

DRINK  
**HEWLETT'S  
LUNETA  
COFFEE**





## POULTRY

### THE POULTRY SHOW AT THE P. P. I. E. AS SEEN BY EDWIN BRICKET.

November 21st to 25th inclusive the days set apart at the World's Fair for the Fowl, both land and water, and her admirers, both has been's and to be's.

The show was held in the building just at the rear of the Panama Canal building, which was a very desirable place.

It was, indeed, a beautiful array of some eight thousand birds, consisting of about 300 different varieties of chickens, turkeys, ducks, geese, pheasants, pea fowl and pigeons.

Although the writer has seen larger shows, yet considering quality, equalized with quantity he can not recall many better and classier exhibitions.

As every fancier well knows, November is a trifle early to get birds in the proper condition for exhibition, on account of having to rush the moulting season.

However there were birds here of very rare merit and truly deserved a prize, yet there were so many, so good, that several previous record breakers, were turned aside, unobserved.

Unlike the other stock exhibits, which were limited to California. Oregon and Washington, the poultry exhibit was open to the entire world. And, too, the entire world responded and all classes were well represented.

In addition to the exhibition classes there was what was known as the Utility class. This class was judged on what is called the "Hogan" system. This is to judge them according to the distance between the pelvic bones and the breast and pelvic bones.

No matter how much of a mongrel a bird was, if her pelvic bones happened to grow right, she was able to win in this class. This system derives its name from the originator.

The writer was compelled to notice the well showing obtained by the Pacific Coast: California in particular, then Oregon and Washington in line.

If the show would have been judged by Western judges we would be inclined to think them partial, but as most of the judges were from the far east, they saw fit to give the ribbons to our Western birds. This should be an inspiration to the Western breeder, including the Utah fancier as well.

Among the most noted and famous birds on exhibition, we noticed the Black Orpington cockerel which was awarded the grand special as best Male bird in the entire show and is valued at \$5000 by his owner. He is certainly a picture to behold. The Partridge Orpington hen, "Queen Mary" who has traveled 21,000 miles on exhibition tours and who has the honor of winning reserve at Crystal Palace, London, first at Madison Square and was first at San Francisco, was there, "Native the White Plymouth Rock Cock, which is valued at \$200, was having his eggs booked for the coming season at \$5.00 each. The White Leghorn hen, "Lady Lay Some More," whose record of 286 eggs was for some time the worlds record, was al-

so to be seen. Then there were three Single Comb White Leghorn hens direct from England with records of 280, 278 and 270.

While the World's Champion egg layer, "Lady Eglantine" (record 341 eggs), the Single Comb White Leghorn wonder of Maryland was not on exhibition, her picture and a complete record of her performance was.

While passing up and down the aisles, the observer could see birds constantly changing owners at prices ranging between \$75.00 and \$200.00 for birds that didn't win a prize at all. One gentleman from Kansas sold six pullets for \$75.00 each, none of which were even in the money.

Among the curiosities of the chicken world, were the long tailed Japanese, whose tail measures over six feet in length; and the speckled sussex, which is a recent aggregation of ingredients from all species of the chicken world.

Bantam fanciers were able to behold about 600 of their "little pets," all in their "sunday cloths" while the Western States are not as strong on Bantams as the east, they are fast coming to the front.

240 turkeys were on display and were a grand lot. Cocks weighing as high as 60 pounds and hens 30 pounds were there. The first prize bronze hen sold for \$50.00 during the show.

280 ducks, 100 geese, and about 15 guineas comprised the remainder of the poultry line and all were of the best.

The pigeon lover had the pleasure of viewing 1668 of his hobby. I think I am safe in saying that after close observation, they were the best 1668 I ever saw in one place, assembled together.

Fantails, Runts, Maltese, Owls, Giant Runts, Hungarians, Carneaux, Silver Kings, Homers, Ring Neck Doves, Tumblers German Beards, Blondenettes, Satinettes, Tuibits, Magpies, Swallows, Trumpeters, Ice's, Nuns, Starling's, Helmets, Preists, Frilbacks, English and Pigney ponters, Archangles, Jacobins, Modenas Flying Homers, Dragoon's, Scanderroons, Carriers, Straussers, Australian Wanga, Nicober and Australian Brozewing-hested; were to be seen in all varieties, kinds, shapes and colors.

The first prize Frillback cock was sold for \$100 and pigeons were sold for from \$5.00 to \$40.00 each, all during the show. The pigeon business is good on the coast from a commercial standpoint as squabs are selling for 40 cents a pound live weight, on the markets.

There was a Flying Homer on exhibit which has a record of 200 miles in Hours.

In addition to the above list were to be seen the Chinese Ringneck Pheasant together with all kinds of pheasant and pea fowls.

Prizes were also awarded on the best dozen eggs, of the different kinds and colors.

There were also to be seen, all latest models and inventions of trap nests, incubators, brooders, medicines

(Continued on page 15)

Following low round trip rates apply from Salt Lake City:

### Home Visitors'

### Excursions

### EAST

Via



November  
20 and 23.

December  
18 and 22.

Limit 90 days  
from date of  
sale.

Denver .....	\$22.50
Colorado Springs.....	\$22.50
Omaha .....	\$40.00
Kansas City .....	\$40.00
St. Louis .....	\$51.20
Memphis .....	\$59.85
Chicago .....	\$59.75
Minneapolis or St. Paul.....	\$53.85

Proportionately low rates from other O. S. L. points to many other eastern points.

EXCURSIONS DAILY to Pacific Coast points until November 30th. inclusive.

October and November are ideal months in which to visit the Pacific Coast. When you go, go one way via Portland and see the "Beautiful Columbia River Country."

City Ticket Office  
HOTEL UTAH

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WHERE IT'S SUMMER ALL WINTER

SPEND THE WINTER  
WHERE YOU WILL  
ENJOY REST  
AND PLEASANT  
WEATHER AMID  
ORANGE GROVES  
AND ROSES.

LONG BEACH  
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For the Buyer

THE FARMERS' MARKET PLACE

This market place offers our subscribers and readers a very good place to advertise. If you have something to sell or want to buy here is the place to tell it. These advertisements are read because they offer bargains, your bargain should be here. Take advantage of this opportunity today.

For the Seller

THE GEM HERD.

Improved Chester White Swine

The Home of the Western Prize Herd  
My winnings at Idaho State Fair 1913, were 13 first, 3 seconds, champion boar and sow, and champion fat barrow  
At a Tri-County fair held at Jerome, Ida., I took all but one second. I have anything wanted in Chesters from a weaning pig to a champion boar or sow at prices all can afford. High class stock. Write me.  
For Reference—all old customers.

GEO. H. LAWSHE.

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FOR SALE

Foundation Stock in Holstein Fresian's and Duroc Jerseys. Will exchange a few for hay or grain. For breeding and particulars write  
JOHN W. STUBBS  
R. D. No. 2. Provo, Utah.

Percheron Stallion

An unusual opportunity to purchase a good stallion. Foaled June 1913. Utah bred. Sire imported Damocles. Very large and finely developed. Direct all inquiries to B. T., Utah Farmer, Lehi, Utah.

FOR SALE

The best hog and dairy farm in Utah containing eighty acres. Also a few very choice duroc boars ready for service.  
WILLIAM MERRILL  
Richmond Utah

For Sale

One registered Jersey Bull calf. One month old. Cheap if taken right away. An exceptionally bright eyed, long bodied hearty individual, from heavy milking and fat producing strains on both mothers and fathers side.  
DR. WALTER T. HASLER  
Provo, Utah.

BUTTER WRAPPERS

We carry a large stock of the Best Vegetable Parchment Butter Wrappers and Especially Prepared Ink for Printing the same. We furnish them Postage Prepaid at the following Prices, money to accompany order.

100	\$ .90
200	\$ 1.25
500	\$ 3.00
1000	\$ 2.75

Send all orders to  
THE UTAH FARMER  
LEHI, UTAH

BOARS!

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BIG DUROC—JERSEYS

Write your wants to  
PULLUM FARM  
Trenton Utah

FOR SALE.

One year old Duroc Jersey boar, Defender—choice, good stock \$18.00 f. o. b. Payson, if taken at once.  
W. G. ROYLANCE  
Payson Utah

IF YOU WANT  
A BARGAIN  
"SEE ME"

160 acres near R. R. in Idaho, house, stable, water right; some alfalfa; part under cultivation. A snap at \$2250; half cash.  
160 acres, West Jordan. A rare bargain for some one. Only \$20 per acre.  
640 acres, part in hay; ¾ of land is fenced; water right for part; a first-class stock proposition. \$16 per acre; \$1500 cash balance easy. Might take equity in good city property.  
320 acres near good town in Sanpete county; modern 9-room brick residence; good stable, sheds; first-class water right; fine springs that could make resort for bathing; most of land in hay, grain and pasture; put in some fine registered milch cows; horses, pigs, farming implements and most of crop. A bargain at \$25,000; terms.  
240-acre improved ranch near Richfield; independent water right; horses, cattle, hogs, chickens, turkeys, implements and some hay and grain goes with this place. Cheap at \$75 per acre; terms.  
GEO. W. DANLEY  
SALT LAKE CITY  
707 Walker Bank Bldg. Wasatch 2989.

Money to Loan

On improved farms with primary water rights, at reasonable rates."

INTER-MOUNTAIN LIFE  
INSURANCE CO.

11th Floor Boston, Bldg.  
Salt Lake City, Utah.

FRUIT AND GARDEN  
FARM.

8 acres—part of the old Central Experimental Farm. Only ¼ mile from Lehi, Sego Lily School and Lehi 4th ward meeting house. A farm on edge of Lehi City Limits. 360 apple trees. Prunes, currants, and gooseberry trees.

CASH OR TERMS.

A. F. GAISFORD  
Lehi Utah

RICHARDS' DUROC JERSEYS

WON AT UTAH STATE FAIR, 1915—Grand Champion Boar, Grand Champion Sow, Senior Champion Boar, Senior Champion Sow Eight First Prizes, Five Second Prizes, and Five Third Prizes.  
RICHARDS DEFENDER, Grand Champion Boar was pronounced by many cavable judges to be the best Duroc Boar ever brought west He is 17 months old weighs over 500 pounds. The big type with quality. That's why he has so many admirers.  
We purchased Junior Champion Sow and first and second prize under six months sows, so that we now have in our herd practically every first prize winner at the 1915 show.  
We can make immediate deliveries of young stock, either sex, from this champion herd at reasonable prices.  
Express rates on stock purchased from us is a small item as our ranch is only 135 miles north of Salt Lake City.

RICHARDS' LIVE STOCK COMPANY

VIRGINIA JESSE S: RICHARDS, Manager: IDAHO

BARGAINS.

One 16-Horse Steam Tractor.  
One 20-Horse Gasoline Tractor.  
Have been used for short time, but are in first-class condition.  
Write for price and details.  
S. PETERSON & CO.,  
210 So. 6 West, Salt Lake City

THE POULTRY SHOW AT THE  
P. P. I. E. AS SEEN BY  
EDWIN BRICKET.

(Continued from page 14)

and remedies of all known as well as unknown kinds, species, shapes, forms and varieties.

In conclusion, the Poultry and Pigeon show at the World's Fair of 1915 was a decided success and a rare treat to the feather fancier. (There was some poultry from Utah on exhibition the writer may not have seen them.)

WE NEED BETTER EGGS.

J. O. Lofgren

Utah Farmer:

Dear Mr. Editor:—Enclosed please find my check \$1.00 for which please send me your paper provided you devote a page or so to the POULTRY industry each month or oftener which in my opinion is one of the most important possibilities in this State.

This is true not because I am devoting my time exclusively along this line, but because it amounts in value to more than the wheat crop, the hay crop, or that of cotton in this Nation, and there is no other industry in Utah more neglected. I challenge any man in Utah that there is not one case in 500 coming to Salt Lake City that is "extra" or "A-number-one" fresh eggs. What I mean is free from a single rot, stale, or containing chick development and fit for poaching or boiling without first grading. This should not be; as eggs coming from the producer or the producing section should all be fresh.

Do not misunderstand me as being radical or as purposely misstating, I am simply stating what I believe to be facts from six years experience in buying and selling the very best eggs that my efforts have been able to get.

By the way, those who have had nineteen years experience is similar to mine. I personally know about twenty persons who deal exclusively in eggs and not one of them has been

able to find eggs that are able to sell without first picking out the rots.

The following is the estimate of eggs handled in Utah last year:

\$1,065,000 "A-number-one."  
1,065,000 seconds or stale, partly a loss.  
1,065,000 culls, partly a loss.  
355,000 rots, chick development, blood rings, a total loss.

\$3,550,000 Total eggs sold to Utah consumers per year.

If this estimate is at all correct there is a wider field for improvement in quality than there is in quantity, or how to make the hen lay 300 eggs per year and then let them spoil before they are sold. The fault lies mostly with the producer, though the country merchant comes in for his share of it, as well as the middleman. It seems to me that it is more important to learn how to take care of eggs when we get them than it is to know how to produce the greatest number, or to build the best coops, or to keep the chicks from getting diseased, or the incubator in good running order, or other matters which we hear so much about all of which is very good and important and is not to be under rated.

Do not understand me as wishing to dictate to you the policy of your valuable paper and my not even being subscriber until now, but if you will permit one more suggestion along the same line. Would you kindly favor us with a few articles the coming year on the following subjects or kindred articles.

"Swat The Rooster," "Fertile and Infertile Eggs Compared," "The Eastern Egg on the Market," "Are Storage Eggs Wholesome?" "Winter Layers," "Is Poultry Raising a Failure?" "Capons," "Government Experiments," "The Practical Side of the Poultry Question," "Our Local Conditions" and many other subjects. Wish you success and if the above suggestions are not meeting your approval you will excuse my taking your time.

An average day's work with a two-horse walking plow is a little less than 1¼ acres, while an average day's work for a three-horse sulky plow is between 2 and 2½ acres.

Farm surveys show that the families living on their own farms generally consume more food per year than do families living on rented farms.



## Waste Labor

It is not always the farmer that works the hardest that makes the most money. It is only properly directed labor that brings very profitable returns.

It is often true that the farmer who works from the early morn until dark and then finds it necessary to do chores by latern light, is the one who at the years end finds difficulty in calculating a very encouraging profit. After he has figured his paltry return, he generally heaps curses on the farming profession. Or possibly just as often marvels to his wife of the excellent harvest of his neighbor and then attributes the same to a streak of luck that likely will visit him next year. But alas another year passes. Again his harvest is naught and his neighbor still wears that happy smile which indicates a farm free from mortgage a nice bank account and a good full purse.

The next year the results are the same and it so overwhelms the unlucky man that he decides to sell his farm. He finds a purchaser and then under his breath as he moves away he says "O but didn't I soak him."

How is it that the two farmers both owning land adjoining should differ so widely in results? In many cases the soil is practically the same and conditions identical. There of course may be many reasons, but one that stands out as most important is proper planning of work. It is not how much labor one puts in his farm that counts so much as how that labor is made to be effective. There are farmers who year after year are placing an almost extravagant amount of labor on their farms when really they have failed to place their soil in a condition to receive that labor.

A soil void of fertility will not respond to the most intensive cultivation and again it will respond only to the proper kind of cultivation and treatment. The farmer who plans ahead, and sees to it that the soil which he works is in a condition to respond to scientific application of labor is the farmer who will succeed. It takes careful planning however to reach this point and it cannot be reached in one year. Each part of the farm is a study in and of itself. But if it is first studied and then handled properly it will give returns otherwise the work is waste labor and brings small profits. There are many farmers who fail to make these observations. They go into the field and without fore thought start work expecting that all will be well if they work from sun to sun. The soil is a good pay master if properly managed but it pays only to the extent that it is scientifically operated.

Now being the fall of the year when work is not so pressing why not look over the farm and begin to make plans for the future? Why not plan for the application of good deal of manure on soils that have been improductive the past few years? Why not illuminate the element of chance or luck and decide that you will employ the method that in the years to come will bring ultimate success. The head can save the feet many a step. It can make your labor productive if you will but use it.

## THE ELECTRIFIED FARM HOUSE. Hannau Jones.

In many sections of Utah electrical power is obtainable from different power companies who furnish it as a business. As most of our farmers live in small cities or towns it is not a great task to have our homes electrified. Once it is installed and some of the benefits demonstrated, people will wonder that any farmer who could possibly afford it would be without it. Some of the helpful electric things you ought to own, are lights for the house, barn and surroundings. Electrical heater for different rooms such as bath rooms, kitchen etc. The power can run feed mixers and grinder of all kind, bone cutters, electrical ranges, electrical fireless cooker, electric iron, toaster, coffee percolator, samovar, table stove, chafing dish and curling iron, while every task which could be done with motive power, including running the sewing-machine, can be performed by the ever ready servant, electricity.

Comparatively few women will have homes as completely electrified as this, but there are few farms where some electrification is not possible—as a gasoline engine can be substituted when electrical power can not be furnished by the companies. With the simplest electric plant or power washing, ironing, churning and running the sewing machine will be elided from the list of exhaustive tasks. When electric cooking appliances are added, the household drudgery quickly falls into the "light housekeeping" class.

### Some General Directions.

When installing a cooking system, care must be taken to have the voltage properly adjusted to the utensil to be used. A special outfit of cooking utensils will be desirable, because less current is required if they clamp to the electric stove. As with most tools, it is better to purchase a few good electric ones rather than a lot of cheap ones. An electric iron should not weigh more than six pounds—less is better—and its detachable cord should be at the base. Cheap electric tools, especially irons, are so poorly constructed that repairs are expensive.

It will be found more satisfactory, in most rooms, to have each connection fitted with a double socket, in one of which an eight-candle power globe can be inserted and in the other a thirty-two. When the brilliant light is desired, it can instantly be turned on and the lower power light will use so little current that it will not be an economy to keep frequently switching it on and off, as this constant breaking of the circuit causes fixtures to wear out more rapidly.

### HOW A TREE GROWS.

The phenomenon of plant growth is one of the most interesting of studies, but, as in all life processes, many of the activities are not understood by man.

Plants have the power of converting inorganic substances; that is, the water, the soil and the air, into organic substances. Animals can not do this. They must live on vegetable food or on other animals which have lived on vegetable matter. Plants can exist without animals, but animals cannot indefinitely exist without plant food.

Trees, like most plants, get a large proportion of their nourishment from the air in the form of carbon dioxide. This must be supplemented by water and minerals which are de-

rived from the soil. The leaves absorb the gases of the atmosphere and the roots absorb from the ground water containing minerals in solution. The water is transported to the leaves through the outer or sapwood of the tree. By means of sunlight the carbon dioxide and water in the leaves are united and changed into soluble carbohydrates (sap), which are then transported through the inner bark and distributed to the growing parts of the plant, where they are changed into insoluble cell substance.

Trees do not grow throughout their bodies, as animals do, but only at the tips of the branches and roots and in a thin layer immediately under the bark. If a nail is driven into a tree trunk, it will always remain the same distance from the center of the tree and from the ground. Because the crown of an old tree is higher above

the ground than that of a young tree, it is popularly believed that the whole trunk has elongated. This is not the case. The elevation of the crown is due to the lower branches dying off and new ones appearing at the top. Since the growth in diameter takes place under the bark, the old bark must be pushed farther and farther outward each year. We would naturally expect that the bark would be ruptured in the course of time. This is just what happens and is the reason why old trees have a ridged and furrowed bark. A thin layer of bark is formed each year under the old bark, thus preventing the wood from being exposed as the old bark becomes ruptured.

Read the advertisements in this issue of the Utah Farmer. They are all reliable companies.



## Make This An Electrical Xmas

We show Electrical Gifts for every member of  
the family.

- so acceptable.
- so inexpensive to buy.
- so economical to operate.

**UTAH POWER & LIGHT Co.**  
"Efficient Public Service"



UT Ag sem

# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region

OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE

VOLUME XII; No. 20

LEHI AND SALT LAKE CITY, UTAH

DECEMBER 18, 1915



LAKE PHOEBE—THIS PICTURE SHOWS HOW THE SNOWS AND WATER ARE HELD IN RESERVE IN OUR MOUNTAINS FOR USE IN THE SUMMER MONTHS.



# Have You Heard of The S. P. U. G.

Way down East there is a society which aims to promote useful giving. It is called the S. P. U. G. which stands for the "SOCIETY for the PREVENTION of USE-LESS GIVING!"

Of course, you appreciate what that means. How many times have we received a half dozen pairs of suspenders when we generally keep ourselves hustling to find a place for one pair! And slippers—sometimes it seems as if the whole neighborhood concentrated on slippers, and half of them just big enough to be too small.

But these are truly useful as compared with a lot of jim-cracks that are invariably passed around.

And when it comes to gifts for the dear women-folk—my goodness me! What an inspiration!—five or six pin cushions, some of which would be utterly ruined if a pin were put in them—perfume—ear rings—red, white and blue kimono's, and a lot of fussy things that no man can name, and it's a question if the women can.

The S. P. U. G. stand for the right kind of giving.

Here's a suggestion. If you want your gift to be really worth while—to last throughout the entire year—if you want to send a little gift that will make it recipient genuinely happy, send your friend a subscription to the UTAH FARMER—52 sparkling issues! This splendid weekly has laid plans for 1916 to build one of the best farm magazines in the West. A host of good things in store!

We have designed a neat little card, and shall notify any of your friends to whom you desire the paper sent, that it comes with your compliments.

Subscriptions are rushing in; hurry with yours!



ESTABLISHED  
1904.  
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PUBLISHED  
EVERY  
SATURDAY.

# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region

COMBINED WITH THE DESERET FARMER AND ROCKY MOUNTAIN FARMING.

ONE DOLLAR  
A YEAR.  
—  
FOREIGN  
SUBSCRIPTION  
\$1.50

VOLUME XII.

LEHI, UTAH, SATURDAY, DECEMBER 18, 1915.

No. 20

## The National Conference On Marketing and Farm Credits

VERY timely suggestions for our farmers to be discussing at the many gatherings that are being held at the present time, and are being planned for the near future, would be along the line of these two important problems—Marketing and Farm Credits.

At the conference held in Chicago forty-three of forty-eight states were represented. Prominent men came from long distances, at large expense, to help take part in these meetings. It is true that even these leaders of men, who have been making a study of these things, had wide difference of opinion in regard to some of the problems.

The best method of bringing the products of the farm to the ultimate customer at the lowest possible expense is one thing we should discuss.

The question of Rural Credits will necessarily be different as conditions and circumstances vary in the different parts of our country. These men seem to think that the best thing to do is to furnish the means so that the farmers can help themselves to produce and market their own crops.

There seems to be a seriousness and earnestness expressed by these men that has not been true with other conferences of similar nature.

The spirit of co-operation—getting together—is here and there is every reason why the farmer ought to do this for his own protection and benefit. In the early settlement of Utah co-operation was a very important feature. The spirit of the times is to return to these principles that so materially helped the pioneers of this state.

We have copies of the talks given, but space will not permit us to give them in full as we would like to do.

The work to be done by this new organization is suggested in the following resolutions:

"To examine into the methods of the production and disposition of farm products, with a view of evolving a system of greater economy and efficiency in handling and marketing the same.

"To encourage and promote the co-operative organization of farmers and of those engaged in allied industries for mutual help in the distribution, storing and marketing of produce.

"To furnish instructors and lecturers upon the subject of co-operation among farmers, auditing and accounting experts, and legal advice on matters relating to organization.

"To issue reports, pamphlets and instructions which will help in spreading knowledge of the best means of rural betterment and organization.

"To encourage and co-operate with government departments, educational centers etc., in all efforts to solve the questions of rural life, rural betterment, and agricultural finance, and the marketing and distribution of produce, and the special application of the facts and methods discovered to the conditions existing among the farmers of America, and to the solution of the problem of the increasing cost of living.

"To investigate the land conditions and land tenure with a view to working out better, more equitable and fairer systems of dealing with this problem so vital to the social and the economic well-being of the country.

"To call from time to time such

three things: (1) Better agriculture; (2) better markets, and (3) better financing. Better agriculture is fairly well taken care of through the work of the Department of Agriculture, in the activities of the many farming associations by the training afforded in the schools and colleges. But, it has been clearly shown that better agriculture depends upon an adequate system of finance. The fact is that the markets and the financing of agriculture remain about as they have been for the past quarter of a century. Improvements, of course, have taken place in the quicker transportation of products and in more prompt financial service. Yet these have not touched the real problem. The farmer is still compelled to rely upon the market machinery, with which he has had little or nothing to do in the matter of its organization, to take the

will do for farm business what the banks have done for commercial enterprises."

Sir Horace Plunkett of Dublin Ireland came across the ocean to address the conference, with the end in view of aiding in organizing American agriculture. He was the first Minister of Agriculture of Ireland and is the father of the Irish co-operative movement which has under its wings 105,000 Irish farmers organized into 1,000 co-operative societies.

He described the weak spot in American rural economy as being a lack of business organization on the part of the farmers. He dwelt upon the chaotic conditions that accompany the marketing of farmers' products and the purchasing of farmers' supplies. He showed how the cities of America and other nations

have been developed at the expense of the countryside. He declared that the time is now ripe for all public spirited persons to interest themselves in the fundamental development of the agriculture of this country. "They must get together" he said, "they must eliminate waste, or America will fall behind more competent nations." He showed how the co-operative movement of Europe has stood the test of the greatest crises in the world's history and dwelt at length upon the sharpening of the business ability of the co-operative managers as a result of the stringent conditions now prevailing. Not only must America learn to organize

her food supply, to meet critical periods such as war, but America must prepare for the great international competition which is bound to strike the American farmer keenest, since he is farthest behind in organization for his own interest. This damage to the farmer will be reflected in every other industry; for America is still dominantly a farming country.

He urged the American farmer to learn the first principles of selling farm products—the preparation of packages for marketing and consignment in such a way that they will be delivered regularly and under guarantee-pack.

"The towns have flourished at the expense of the country. Now, by the use of the townsmen's methods, the countrymen can only come into their own again, but the form of combination which farmers must develop for their own welfare differs somewhat from the form of combination that

(Continued on page 13)



conferences or conventions as will help to carry out the above mentioned subjects."

The resolutions also provide for the permanent organization of the National Conference on Marketing and Farm Credits, and the meeting of this conference to be an annual event for the purpose of discussion of problems that surround the production, distribution and financing of the American farm and American farm products.

Chairman Doctor Franklin McVey in opening the conference said in part:

"We are told that of the wealth produced in a given year, agriculture was to be credited for \$9,000,000,000. Another feature of importance of this great occupation is that 36 per cent of the population is engaged in it or is supported by it. Despite this vast showing, agriculture taken as a whole in this country, has not prospered. It is agreed that there must be changes. These changes may be centered about

product to the consumer. Between the farmer and the consumer there is a great commercial and financial gap."

"It is time for a great agricultural society on a national basis to study and formulate the principles for the expansion of the nation's greatest business. How can individual farmers work with their neighbors? How can neighborhood groups work with other groups of a similar character? The confusion of the present can not continue.

"In the final analysis, no one is going to solve the farmer's problems for him. He must do that for himself. Nor will he solve the great problems of marketing and farm credits by his clannish attitude of class spirit. The problems are fundamentally economic and must be based upon sound principles of business and finance. Hence co-operation becomes the keynote, working, as it does, for results in the standardization of products, and in the hopes for a system of finance that



## DAIRYING

Murray, Utah.

Utah Farmer:

My neighbor has a very fine two year old Jersey heifer just calved. Her teats and bag are entirely covered with small warts. Please recommend a remedy.

Answered by Dr. H. J. Frederick.  
Warts on Cow's Udder.

Conditions of this kind very often occur, and, in most instances, disappear again much in the same way they first appeared. However, where a tumorous condition continues and these warts should interfere, if they are of the kind that project out from the skin, they could be clipped off with a pair of scissors. They then should be thoroughly cleaned with an antiseptic and then painted with Silver Nitrate. In most instances this will overcome the difficulty. However, where they are extremely numerous and the warts are of a flat nature, we usually allow them to remain, and in some instances, paint them over with castor oil to cause their removal. A great many of them, however, disappear of their own accord without treatment. If the animal is valuable, you might call in a competent veterinarian to remove the warts, and then apply the above treatment.

Draper, Utah.

Utah Farmer:

Will feeding potatoes dry milk cows up?

Answered by Dr. W. E. Carroll.

Considerable experimental work has been done in feeding potatoes to dairy cows. In Germany large quantities of potatoes are fed, and no reports have been made of potatoes decreasing the milk flow. Potatoes have also been fed at experiment stations in the United States to good advantage so far as milk flow is concerned. The question of potatoes drying cows off has absolutely no foundation if the potatoes are fed in reason. Of course, if the cow is allowed to eat enough potatoes to disarrange her digestive system her milk flow would be diminished just as it would be if she were overfed on hay or grain. Potatoes should be cut before feeding to prevent the possibility of choking the cow, and in this condition can be fed in quantities up to 20 pounds and will actually increase the milk flow rather than dry the cow off. When fed in very large quantities potatoes do

have a detrimental effect upon the quality of the butter produced giving it a salty appearance. Small potatoes which have a strong flavor may also taint the milk and butter. From this you will see that there is no danger of drying the cow by feeding her potatoes. Caution should be exercised, however, not to lower the quality of the product too much.

Heyburn, Idaho.

Utah Farmer:

I have a cow that since her last calf one quarter of her udder has gone dry. I had a veterinary surgeon and he said to bathe it in salt water, but this did no good. Is there anything I can do, or will it come alright with her next calf? I also have a cow that is very hard to milk. Is there any way that I can make her easier to milk?

Yours respectfully,

J. STOCKING.

Answered by Dr. H. J. Frederick.

Where a cow's udder is affected, as you describe, the milk duct passing up through the teat should be opened with a sterilized milking tube. The quarter should be rubbed three or four times a day and milked out either with the tube in or without it so as to relieve the udder. If this is done on the on-set, the trouble should be overcome. If allowed to go and the quarter allowed to dry up, very little can be done. The quarter may become functional the next time the animal freshens. However, it may be necessary to open the milk duct either with a tube or a teat splitter. Perfect cleanliness must be observed in an operation of this kind or an infection may be the result causing that quarter, or perhaps the entire udder, to become functionless. Any troubles of this kind should be attended to at once and not allowed to go for any period of time.

Victor, Idaho

Utah Farmer:

Dear Sir:—I have three cows with contagious abortion. They have lost two calves each now, at about 6 to 8 months along the cows would miscarry and the after birth was inflamed or had round sores on it. What much I do with my cows? Please answer in your paper, or better still answer by letter, I will send stamp for the same. Thanking you in advance I remain a subscriber.

W. J. COY.

Answered by Dr. H. J. Frederick.  
Contagious Abortion.

This disease is becoming quite prevalent in different localities and is proving very detrimental to the dairy industry. Where animals are affected with this disease they should be isolated and cleaned up by using a weak solution of some disinfectant as Lysol or Creolin—a 1 per cent solution—to cleanse the affected parts daily for a number of days and then apply it at longer intervals for about two weeks. They should not be bred for at least three months. All discharges, as well as the foetus, should be burned or buried deeply in the ground; after all litter has been removed the premises should be disinfected with a good disinfectant. You may use about a 5 to 10 per cent

## Utah's Best Dairymen

Again we congratulate the users of our machine on their splendid victories at Utah's great 1915 State Fair.

Smith Bros. Jersey Farm was awarded the Loving Cup and a number of Blue Ribbons.

### Use

Cannon Bros. splendid Jerseys gave a good account of themselves. Won first place with a cow that has made 704 pounds of butter in one year, and has captured other prizes.

W. C. Winder showed his well known Jerseys; won Ribbons as usual.

## The U. S. Cream Separator

W. H. Smith and Son, "Uncle Jake," showed his splendid Ayrshires, won \$200 cash and Blue Ribbons.

Wooley's Guernseys brought Blue Ribbons from the Cache County Fair and won Ribbons also.

John H. Seeley showed his famous Short Horns and Durhams and displayed highest prizes.

J. M. Ritchie from Charleston showed his fine Herefords and won prizes.

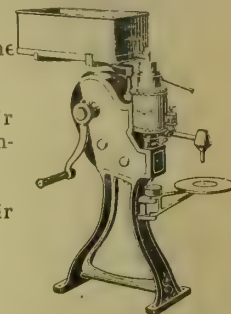
Roosevelt Live Stock Company showed their fine Short Horns which were in the prize winning class.

Hatch Farm Dairy scored 97.25 with their milk.

Frank Croft, Jr., won first, his class.

These successful dairymen and breeders use the U. S. Cream Separator. You can profit by their long experience and judgment. The winners use the U. S. Use the U. S. and be a Winner.

ADDRESS H. E. WALKER, SUPERVISING TRAVELER  
UNITED STATES CREAM SEPARATOR  
BOX 964, SALT LAKE CITY.



solution of some good coal tar disinfectant. Care should be exercised not to bring other animals onto the premises unless they are absolutely free from this trouble. Where this trouble continues for any great length of time it is very difficult to overcome. Therefore, it should be checked at its onset. If there is a qualified veterinarian in your locality, I would advise your calling him in to help in overcoming this trouble.

Idaho Falls, Idaho.

Utah Farmer:

What is a good ration for dairy cows with the following feeds available at the prices given:

Alfalfa hay \$8.00 per ton.  
Bran and shorts \$1.25 per cwt.  
Barley 90 cents per cwt.  
Beet pulp 35 cents per ton.

Answered by Dr. W. E. Carroll.

With grains the price you quote (bran and shorts \$1.25, barley 90 cents, beet pulp 35 cents per ton) that the following will probably be found as economical and productive a ration for dry cows as any:

Let the cow have what bright alfalfa hay she will consume and in addition about one pound of chopped

barley per day for each 3 to 5 pounds of milk produced per day. If care is taken to keep the utensils used in feeding beet pulp perfectly clean that may be fed to a very good advantage. Too often, however, the premises become filthy with beet pulp when that is being fed. The cows may be given as much as 30 or 40 pounds of beet pulp per day if they so desire. I would, however, not force them to eat it except at first when they may need some encouragement.

WHAT IS GLUTEN MEAL?

Answered by Dr. W. E. Carroll.

"Gluten Meal" is a by-product of the starch and glucose industry. In the process of starch making certain layers of the corn kernel, not being composed of starch, is discarded from that industry. This material is dried and ground up, and called "Gluten Meal." It contains usually 8 to 9 per cent of water, 1 to 5 per cent of ash, 25 to 35 per cent protein, 43 to 48 per cent nitrogen free extract, 2 to 9 per cent fibre, and from 5 to 10 per cent of fat.

This should not be confused with gluten feed, which is this material mixed with the corn bran, and has a lower feed value.

Steady growth is a testimonial to "safety and service."

The number of accounts with this bank has been tripled in four years.

**Walker Brothers**  
**Bankers**

Salt Lake City.





## LIVE STOCK

Utah Farmer:

Gentlemen:—Will you tell me through the Utah Farmer what is the matter of my young pigs and what to do for them. They have a cankerish looking sore which appears on the head generally on top of the snout often in the mouth and around the lips sometimes it runs up into the eyes and swells them shut in some cases it even runs on to the ears. When it appears in the mouth or

eyes the pigs or unable to eat and usually dwindle away and die. I have 0 or 40 pigs affected and have had probably 25 deaths. It affects only be nursing pigs or them that are just weaned.

Yours Truly,  
M. GRUNDY.

Answered by Dr. H. J. Frederick.  
Sore Mouth of Pigs.

This condition usually affects young pigs, and especially those that are kept in contaminated surroundings. The ground or the pens may have been infected and where young pigs bite each other, as they often do, wounds are inflicted around the head which become infected and a regular cankerous condition is the result. The pens or places where the pigs are kept should be thoroughly cleaned and disinfected. After all litter has been removed about a 5 per cent solution of some good coal tar disinfectant should be sprayed through the pens and grounds where the pigs are located. Some breeders extract or break the teeth of young pigs so that they will not inflict harm to the others. In this way the infection is lessened. Where they are affected it will be necessary to cleanse the parts with a good antiseptic, about a 2 per cent solution of Lysol with water. After the sores have been thoroughly cleansed with the above disinfectant, they may be painted with Tincture of Iodine, and in most instances the trouble may be overcome, but it must be closely watched.

DON'T NEGLECT THE COWS  
IN THE FALL.

Nelson and Ricks Dairy-Help Bulletin No. 1. Written by Dr. W. E. Carroll.

On the average farm after the fall crops have been harvested, there is a great deal of pasture available in the cleared fields. This, if properly utilized, contributes many dollars toward paying the winter feed bill. Such feed is so cheap and easily fed that there is a great temptation on the part of the farmer to use it to the detriment of the herd. That is, the herd is too often turned into the fields and given nothing except what they gather themselves. This may do for a short time while "the picking is good." In the rush of fall work, however, the fields often become bare before the cows are given much attention.

This would not be serious with beef cattle and stock cattle merely being "wintered over." The dairy cow, however, is a very different organism. She is more sensitive to conditions of this kind and shows their effect upon her by a decrease in the milk flow. This is especially to be guarded against during the fall and winter, as then it is next to impossible, after cows have once fallen off in their milk, to get them back to their full flow.

Prevention is easier and much cheaper in this regard than cure. To keep a rack of good alfalfa hay in the corral for the cows at night is an excellent practice. As the feed becomes scarce in the fields the cows can then finish their fill at the rack. So long as the feed is good in the fields the cows will come in at night full and will consume little hay. With

## Free Helps For Dairymen

The Nelson and Ricks Company, of Salt Lake announce they have secured the services of

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Head of the Department of Animal Husbandry of the Utah Agricultural College, Logan, Utah, who each month will prepare an article dealing directly and intimately with the subjects of the utmost interest and importance to very owner of a dairy herd.

We shall print and distribute each month a limited number of Professor Carroll's articles as they are prepared. There is not the slightest obligation or expense incurred in receiving these articles.

The first article is now ready. Just send in your name and we will mail it promptly.

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## Dry Feet An Asset To Good Health

By The Oil Philosopher.

Dry feet is the index to good health. If you don't keep your feet dry and warm, how can you expect to save doctor bills and preserve the health of your family?

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and the cost is so small it is insignificant. This oil, applied to the shoes, forms a barrier to all water and dampness, and keeps the feet dry and warm. Being a natural oil for shoe leather, it is beneficial in preserving the appearance and reducing wear.

Don't suffer with wet feet when your dealer can furnish you with Duck-Back Shoe Oil. If you should ever find him out of stock, write the Utah Oil Refining Company, Salt Lake City, and it will see that you are supplied.

## Royal Bread--Fresh Every Day At Your Grocer's

It's a treat for the whole family when fresh "Royal Table Queen" is served. It's really surprising how an otherwise scant meal takes on an added zest with this perfect bread. It's cheaper to serve Royal Table Queen than it is to bake yourself. And think of the work it saves.

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has the natural wheat flavor which tastes so good. This is the result of a blend of four of the highest grades of flour, used for this perfect bread.

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the hay available, however, there is little danger of them going hungry and cutting down the milk supply.

**Breed Cows Now to Freshen in the Fall.**

In determining the best season of the year to have dairy cows freshen, four things must be considered: (1) labor involved, (2) cost of feed, (3) effect on the calf, and (4) effect on the cow.

(1) Where calves are to be raised by hand the labor is about as great

at one season as another, though most men have more time during the winter than in the summer when crops are on.

(2) Cost of feed must be considered from two angles—the feed of the cow and the feed of the calf to a producing age.

Cows in milk should receive more and better feed in winter than is necessary for dry cows. Some records of farms in Utah indicate that it

(Continued on page 9)



## Field and Farm

### AGRICULTURE LESSON XVII. FARM DITCHES.

Prof. J. C. Hogenson.

If a farm is to be irrigated properly, after leveling has been done, great care should be taken to lay out the ditches, field laterals, flumes, etc., which distribute the water from the farm headgate; that economy and efficiency shall be obtained. The ditches from the main canal should be built to serve the entire farm and should be placed so as to interfere as little as possible with agricultural operations. They usually follow either the contour of the land, or some plan of dividing the farm into permanent fields. After it has been decided where the permanent ditches are to be built, they should be well constructed. The permanent ditch is to the farm field what the canal is to the farm, the permanent medium of water transportation, and upon it must depend the efficiency of water delivery from the headgate to the highest point in the field.

Temporary ditches or laterals are made from the permanent ones to various parts of the field that are to be watered. Their location is not so important since they are to be used but for one year and for but one crop.

#### Methods of Irrigation.

##### Flood.

By this method the water is taken out of the main ditches at intervals and allowed to run through laterals and small furrows. As the water is diverted from these furrows it finally covers the field if the land has been properly leveled.

##### Canvas Dam.

A very convenient device for a temporary dam to be used in diverting water in irrigation is the Canvas dam. This consists of a rectangular piece of stout canvas of sufficient size to allow several inches to lap against the sides of the ditch. Make a wide hem across one side deep enough for a 2 x 4 stick to be thrust through. This stick is placed across the top of the ditch, pull the canvas to bottom of ditch and by placing a shovelful of dirt on the corners the dam is ready. As soon as a section has been irrigated the dam is removed and replaced lower down the ditch.

##### Furrow Method.

In this method small furrows leading from the supply ditch traverse

the field to be irrigated. Water flows down the furrows and is absorbed by the soil. After the crop has been planted these little furrows are made about three feet apart by some kind of a furrowing implement.

Under certain conditions where water is plentiful the flooding method will be found to be most serviceable; while under other conditions the furrowing method will be of the greatest economic importance.

#### Water Measurement.

The weir method of water measurement may be used safely and easily by the farmer. The Cippoletti weir is the one most commonly used. In making a Cippoletti weir: 1. Give the sides of the notch a slope of one unit horizontal to four units vertical. 2. Cut the notch with a bevel edge on the downstream face so that there will be a sharp edge up stream. Make the bevel at least 45 degrees, and more if the wall of the weir is thicker than two inches. 3. Face the upstream side of the notch with sheet iron strips, and file the notch to a knife edge. When the weir is finished the up-stream face should be smooth. 4. Make the weir board long enough so that when it is installed the distance from the end of the crest to the side of the canal bank up stream, shall be at least three times the depth of the water, above the crest. Make the weir board deep enough so that the distance from the crest to the bottom of the channel shall be at least three times the depth of the water above the crest.

#### Installation.

1. Choose a position in the channel where the approach is straight and level. When the weir is set there should be a pond of comparatively still water above for at least 50 feet for weirs of 6-foot crest or smaller, and 50 to 150 feet for weirs of 6 to 20-foot crest. The water should be quiet as it approaches the weir, and the filaments should be moving parallel to each other, and not be whirling in eddies or moving in cross-currents. To insure this condition is the reason for enlarging the channel above the weir. As the water approaches the weir it should always move slower than 6 inches per second.

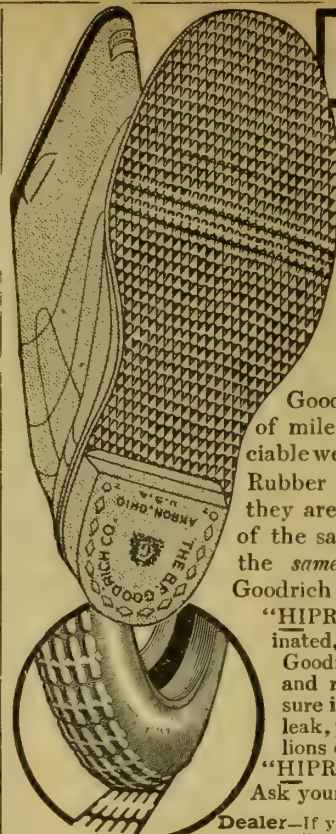
2. The up-stream channel can be a large pond, if it is convenient; but if it is small in cross-section, it should be uniform for 50 to 150 feet above.

3. The weir should be placed directly across the channel, at right angles to the approach, in a vertical position, and with the crest on a level.

4. Provision should be made for washing out the sediment which will be deposited above. The weir can be made movable so that it can be lifted out of the channel, or it can be provided with small flush gates beneath the crest.

5. The downstream channel should have sufficient fall so that the water will be carried away without interfering with the flow through the weir. Always have free circulation of air under the jet of water, as it pours through the notch; it does not matter how little or how great the drop so long as this condition is maintained.

6. For accurate measurement the depth of the water on the crest should not be less than 3 inches and not



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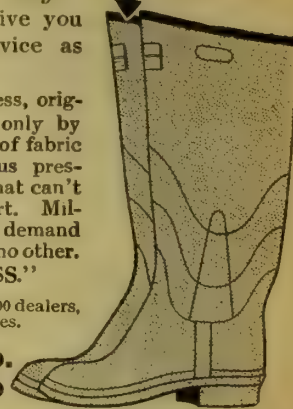
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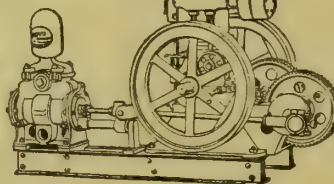
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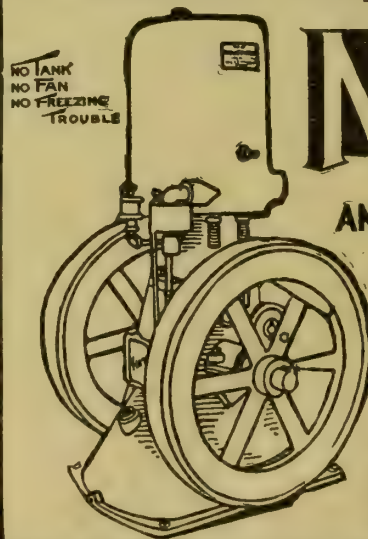
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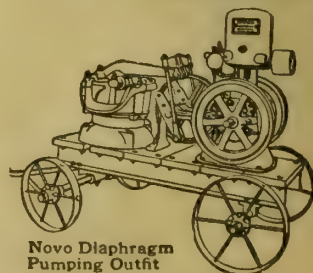
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greater than one-third the length of the crest. For large weirs, the depth should not exceed two to three feet.

When the weir has once been installed it is necessary to determine only the depth of water above the crest of the weir some distance back of the weir itself, where the overfall has not yet begun to curve the water downward. Then by use of tables the water in cubic feet per second passing over the weir may be determined. Tables are sometimes not convenient to use. For that reason plates have been devised that may be screwed to the side of the weir box, which show by inspection the number of cubic feet of water passing over the weir every second of time. A different table or a different plate must, of course, be used for each size of weir.

**Water Division.**  
To divide a stream accurately place a sharp edged board below the weir so that the water as it falls from the weir will be divided into the proportional parts desired.

**Definitions of Water Units.**

**Second Foot.** The "miner's inch" is a term which is long discarded because of the many disadvantages which are associated with it. There is no excuse for using such a unit when we have one which conveys so much more information, and is so much easier to comprehend. The "Second Foot" does away with all the vagueness associated with the miner's inch, and gives us something concrete. By combining the second of time with the cubic foot of measure we get the term "second foot," which is used as the unit of measure for the flow of streams when a stream is discharging one cubic foot of water every second

of time, there is a second foot flow.

**Acre Foot.** An acre foot of water means enough water to cover an acre to a depth of one foot, or a sheet of water over an acre one foot deep. "Acre Foot" is the unit used in speaking of the amount of water applied in the production of the crop, or of the duty of water. An acre inch is one-twelfth of an acre foot.

**Second Foot and Acre Foot.** There is a direct relationship between the second foot and the acre foot, hence if the farmer knows how to measure his stream he can easily determine how much water he is using per acre, and he can begin to use water with some degree of intelligence. A second foot stream discharges one acre inch per hour, one acre foot in 12 hours and two acre feet per day.

The average irrigation season in Utah runs from May 1st to August 31st, or four months.

A second foot stream discharges 240 acre feet in four months.

**Duty of Water.**

In irrigation, the duty of water means the amount of water applied per acre in the production of a crop. A high duty means a small amount of water for a large amount of land, and a low duty means a large amount of water for a small of land. In Utah there is a very low duty in most sections as compared with the duty in some of our sister states—California for example. In the citrus belt of California, the duty ranges between one second foot to 200 acres and one second foot to 120 acres. In Utah the duty as allowed by the State engineer at the present time, is one second foot for each 70 acres, and many of the old water users have acquired

rights to as high as one second foot to 20 acres, which means enough water to cover each acre to a depth of 12 feet in four months, or 36 feet during the year. When we consider that 2½ acre feet is the maximum needed in this state, in addition to the precipitation, to produce a crop, if applied during the irrigation season, it is seen how extravagant we are in the use of water.

A second foot stream will deliver 3.4 acre feet per acre to 70 acres between May 1st and August 31st. A second foot stream will deliver 2.4 acre feet per acre to 100 acres between May 1st and August 31st, and 2 acre feet per acre to 120 acres or 1.5 acre feet per acre to 160 acres in the same length of time.

#### WORTHLESS WEEDS.

Weeds work under no award; they put in 24 hours each day drawing from the soil water that can ill be spared.

Their chief purpose in life is to rob the soil of plant food, light, air, and warmth.

Every weed is an alien enemy, and very often it is allied to insect and fungoid pests, whose offensive never ceases.

Weeds make the work harder; they hinder cultivation, and cause excessive wear and tear of stock, implements, energies, and temper.

In addition to the toll they levy on the soil and the water, they are responsible for a waste of manure, extra cost of harvesting, and loss entailed by harvesting an impure crop, for all of which the farmer has to pay.

Kill them before they have time to propagate themselves and get them under the ground. The most useless weed may make a little humus after it has been some time dead. As long as it is left alive it is constant menace to your neighbors as well as to yourself.—Irrigation Record.

Visitor: "Hello, Johnny, where is your mother?"

Johnny: "Ma's gone to the front."

Visitor: "Gone to the front? Indeed, what for?"

Johnny: "Because the rent-man is at the back door."

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Under the present conditions you are paying 9 per cent, or \$90 a year for interest alone, and at the end of the period for which it was loaned you still owe the principal of \$1000. Under our plan \$73 a year will pay off a loan from us of \$1000, both interest and principal at the end of the time.

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We guarantee every subscriber against loss thru dishonesty or attempted swindle by any advertiser in this publication. We do not attempt, however, to adjust trifling differences between the subscribers and honest, responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within thirty days from date of the transaction, and the subscriber must have mentioned Utah Farmer when writing the advertiser.

Have you made any effort to get a cow testing association in your community. Right now is the time to act. If you want some help write us.

Spend a hour or two around the barn yard cleaning it up. How much feed do you waste because of wet, muddy conditions? A little drain, a few hours work, and load or two of gravel would change the condition of the whole place.

We are told of a modern "gleaner." She is a widow lady living in the Uinta country. By her careful gleaning and cutting of sweet clover during the past summer she has harvested \$350.00 worth of sweet clover seed. It was gathered along the road side and ditch banks. Why don't some of our farmers turn waste places into profits?

#### OUR CHRISTMAS GREETING.

May every reader of the Utah Farmer enjoy their Christmas. Forget your troubles and let every member of the family join in the spirit of Xmas "Peace on earth good will toward men" we have every reason for following this advice, in so doing it will bring joy and peace to all of us. This is the time to give joy, give peace, show good will toward all men, give love, give sunshine, give the best you have and your power to give will increase. The more you give away of these things the more you have to give. You grow by giving. May the spirit of Christ be found in your home this Christmas time.

#### ROADS.

Winter is just beginning. While the roads are frozen little trouble will be experienced in traveling them but when they thaw then will the poorly kept road tell. Possibly the one thing causing most serious trouble with roads is improper drainage. A little work done at the right time, scraping the sides low and making the center high, will do much to eliminate the soft bottom less road in the spring. On your farm you likely know of some places that are always soft and difficult to drive through in the spring. If possible drain such places and then fill them in. It many times saves much money to take precaution against the dangers of a poor road. If you wait until spring your work will not be nearly so effective. Do it now.

#### BUYING AND SELLING OF PURE BRED STOCK

During the past week we have received several letters asking where this or that kind of pure bred stock can be purchased. Many times we have the information and are glad to give it to our subscribers. There is one thing, however, that a number of our breeders seem to over look and that is, that they should advertise, let people know the kind and quality of stock they are producing. Some say, we will advertise when we have some stock for sale. This is alright as far as it goes but the man who has created a favorable impression previous to the time he wants to sell, has a much better chance of selling than the one who waits until the last minute, or just at the time his stock is ready for sale. How can people know that you have certain kind of stock for sale unless you advertise it in some way?

#### FARM SURVEYS.

This year a great many farm surveys have been made in the state of Utah. In the past numbers of the Utah Farmer, are contained the results. It has been definitely pointed out that returns of farmers are almost wholly controlled by proper managership. It has been shown that a proper relation of investment in equipment, land and labor should prevail for best results. Farms yielding the greater net returns have been discussed in full. There is a surprising difference in the returns of farmers having practically identical opportunities. Now is the time to study over these reports and then modify your farm methods that best profits might be possible. Change your system if a better way is shown.

#### CONGRESS AND THE FARMER.

Never before in the history of our nation has the farmer been given more prominence. The field with which he is concerned seems to be a common field of interest to all people. In President Wilson's recent message to Congress he recommends an appropriation for industrial and vocational aid. The Rural Credit System promises to be an interesting feature of the coming legislature. The time seems to be here when the farmer is to be considered. If Congress does its full duty toward us it will spend considerable time on these problems and render the best service possible. It would do well to make appropriations for more complete dissemination of agricultural knowledge. It would do well to make possible a closer relationship between farmer and consumer. Let us watch and see how closely they meet our expectations.

#### SAVE MONEY BY EXCHANGING STALLIONS

Many communities have one or more high priced stallions. These horses can be used for breeding purposes in the same community only about three or four years to the best advantage. At this time some of the female colts of the stallion are ready for breeding, and another sire is in demand. The fact that about every community is in the same condition makes it advisable, that so far as possible, the system of exchanging stallions be adopted. Of course, each community feels that its stallion is the best of the breed, and yet there are many horses which could be brought in on an exchanging basis which would do the community as much good as the horse now owned has done. By all means get a horse of the same breed, and as nearly the same type as possible. Such points as color, in many breeds where the color is not fixed, should play a very unimportant part in making the selection. Conformation and type are far more importance in a sire than is color. The State Board of Horse Commissioners, Logan, Utah, is often in a position to put breeders in touch with stallions which may be obtained on this exchange method. By using it wisely it saves practically the cost of a new horse, because the average stallion is useful for at least two different communities.

#### OUR TAXES.

Many of us have recently paid our taxes, and it gave most of us some cause for considerable thinking. The new laws and the penalty for delinquent taxes have been a subject of much discussion of late. We heard two men talking about two certain incorporated companies in the same line of business located in different towns. One was very successful and their stock was selling at three times its par value and was earning a good dividend at the increased value. The other company was not very successful and their stock was selling below par, yet these men said both companies were paying the exact same amount of taxes.

In the assessment of property many mistakes have been made, when one piece of property is compared with the other as to assessed valuations. It may have been the fault of the assessor or may have been the misrepresentations of the owner. It is wrong in either event.

Next year we are to be assessed "at the full cash value." Can it and will it be done? It makes very little difference, whether the base is, one-third, one half or full value, but it makes a big difference if the assessment is not just and equitable. In some cities of the state meeting are being held by property owners to discuss this question of taxes.

To ascertain the cash value or market value, of real-estate is not going to be so hard but when it comes to improvements, machinery, merchandise, money and solvent credits and live stock it is going to be a hard job to give every one a square deal. Owners will misrepresent and think it is alright to "beat the tax man." The assessor must be a well posted man and show no favoritism. The great majority of people are not trying to get out of paying taxes when necessary but they want a square deal against the "tax dodger." Caution must be exercised by those who make the percentages not to increase our taxes just because of the increased amount of assessment. Our taxes should be reduced. The burden is becoming a big load for some to carry.



DON'T NEGLECT THE COWS  
IN THE FALL.

(Continued from page 5)

costs about \$5 per head per year more to feed cows that freshen in the fall.

(3) The fall calf will eat little but milk till it is turned out on grass. A heifer calving at 2 year old would, therefore require feeding 2 summers and 1 winter before her usefulness began. A spring calf would require 2 winters and 1 summer, which would no doubt be more expensive.

From another angle the fall calf has the advantage. It can be kept growing nicely all winter on skim milk and can be turned out to grass without checking its growth. The spring calf gets its milk all summer and great care and some grain are necessary to keep it growing as it is weaned and put on dry feed.

Then, too, the winter cold seems to be less detrimental to the calf than are summer flies.

(4) Records have shown that cows freshening in the fall actually produce more than those freshening in

the spring. In one case where more than 80 cows were involved, this amounted to 45 pounds of fat per cow per year. This, with the higher price fat usually brings in winter, made the profit over cost of feed over \$9 greater per head for the fall cows.

WHY BUILD A SILO?  
By J. S. Bredvold.

The first and probably most important point in favor of the silo is the saving feed. Bundle corn left in the field or stack loses from one-third to one-half of its feeding value through evaporation. This statement may seem absurd to many, because as far as we can see with the eye there is nothing gone in well-cured fodder, but the moisture; but upon analysis the chemists find a loss of nutrients as well as moisture. This is due to drying out and dry fermentation.

Succulent feed is nature's feed. Fodder and grasses in their green state are the best feed we can get for our stock. When dried out it loses moisture or succulence and certain flavors which are present in the green state. We all know the superior flavor of the fresh apple over the dried product. It is the same with a bundle corn and ensilage, with a little more in favor of the silage, as the fodder is not cared for nearly as well as the dried apple. When left out in the shock of elements to work on it and fill with dust and dirt it loses much more than the chemists' analysis show, namely succulency or taste. It is the universal testimony of feeders that silage has a beneficial effect on the cow's system, as it has a mild laxative effect similar to grass or green fodders, thereby inducing the cow to eat more dry feed.

In no building can we store roughage so cheaply as in the silo. A ton of hay in the mow will fill a space of at least 400 cubic feet; a ton of silage in the silo a space of about 50 feet. Considering the dry matter we find that 8,000 pounds of silage contain about as much dry matter as 2,323 pounds of hay, or 160 against 465 feet in favor of the silo. In other words, it takes nearly three times as much room to store the same dry matter in hay as in silage and the cost of the building per ton of capacity is much less in the silo.

The convenience of feeding the ensilage in winter is no small matter. You remember last winter when, with the temperature below zero, with a fresh northwester, you had to get out after that bundle corn to feed the stock. It made you kind of wish you had a silo, didn't it—where you could just climb up the ladder and throw down nice, clean, succulent ensilage instead of snowy and dirty fodder corn? Just bring some of these refreshing scenes to mind and maybe you will have a silo next winter.

The cost of filling seems to be bothering more farmers than anything else. The machinery can be bought in company by two or more farmers, and by working together the silo can be filled at very little more cost than shocking and hauling in winter.

In our community one man has the machinery and fills for the neighbors, charging \$6 much for the job. Three neighbors went together and bought a corn binder and a bundle

elevator on it, so all pitching was done away with. In this way four teams can just about fill a 16 by 30 foot silo in a day when it runs steady. When handled in this way the work is reduced to a minimum.—Farm, Stock and Home.

Huntington, Utah.

Utah Farmer:

My chickens have a mattery substance in both eyes, also in the nostrils they go around shaking their heads. Can you please tell me what to do for them? I also have a horse that has a ring bone started on the front right foot just above the hoof could you please tell me what can be done to cure this? Please tell me in next paper.

Respectfully yours,  
J. A. BROWN.

Answered by Dr. H. J. Frederick.  
Catarrh or Cold in the Head of Chickens.

This condition is usually caused by too much exposure to cold or damp weather or to the drafts of air. Hen houses should be built with the three sides practically air tight with a southern exposure to admit air and sunlight. This will keep the drafts away from the chickens during inclement weather and aid materially in keeping them free from this trouble. This is also prevented by keeping the birds strong and vigorous and providing them with plenty of good clean food and fresh water. This is very often overcome in three or four days. However, if it continues and becomes serious, the nostrils and mouth should be washed out twice a day with a 1 per cent solution of Creolin. Keep your chickens free from exposure during the sudden changes of the weather.

The hum of the ensilage cutter will soon be heard. Its music is as sweet as the sighing of the breeze in a good pasture.

Farm buildings folder free. Shows designs of houses, barns, granaries, etc., at our big, money-saving prices. Western Lumber & Millwork Company, Tacoma, Washington.

Home surroundings are combined with hospital facilities for your convenience.


We are located in the residential district yet within four blocks from the heart of the business section of Salt Lake City.

A visit from you will be welcome which will afford opportunity for you to become acquainted with us.

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Better Sugar Than This

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There is no better sugar for jelly making, preserving, cooking, etc. It's easy for you to say "Utah-Idaho Sugar" when ordering sugar.

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SALT LAKE STAMP CO. Salt Lake, Utah.

Read the advertisements in this issue of the Farmer.



## THE HOME

### CHRISTMAS DINNER.

Miss Bab Bell.

The best of Christmas dinners may be secured without too great expense this year for simplicity and science agree that it is useless to stuff the dinner with three or four dishes of the same food value. If the dinner is to be served in the country, home-grown fruits, vegetables, and fowls and fresh eggs, butter, and milk give the housewife a great advantage, and such simple things as buckberries from the roadside, or a geranium from the windowsill add to the attractiveness of the table. A few evergreen wreaths and some autumn leaves will help greatly.

In order that nothing may be forgotten, and that a big rush Christmas morning may be avoided, preparation should begin several days before Christmas. The chicken, turkey, or goose may be dressed and kept in a cool place, crumbs for the dressing prepared and seasoned, lettuce washed for the salad, and mayonnaise made ready. Mince pies may be baked and kept ready for reheating, cranberry jelly kept on hand for several days, and cakes baked and mints prepared. With all these things ready, the hostess will have much more of the Christmas spirit, and be able to entertain her guests much better.

Although prices vary greatly from place to place, I undertaken to select menus to fit pocketbooks of various sizes.

#### Dinner for Six \$1.75.

Clear soup.  
Roast Chicken.  
Cranberry jelly.  
Baked potatoes.  
Cottage cheese and pimentos.  
Plum pudding.  
Coffee or milk.  
Wafers.  
Giblet sauce.  
Green peas.  
Hard sauce.  
Mints.

#### Dinner for Six \$1.75.

Cream of celery soup  
Wafers.  
Roast duck  
Tomato sauce.  
Mashed potatoes.  
Stuffed baked apples.  
Cabbage salad.  
Custard with whipped cream.  
Fruit cake.  
Coffee.  
Mints.

#### Dinner for Six \$3.00.

Cream of tomato soup.  
Baked turkey with nuts and raisin dressing.  
Mashed potatoes.  
Jellied salad with cabbage and pimentos.  
Mince pie.  
Coffee or milk.  
Wafers.  
Baked stuffed onions.  
Mints.

The feast is tasted with the eye before it reaches the palate and a very simple meal may be made delicious when served on spotless linen and a well decorated table. Flowers, ferns, large dish of fruit, or something else of that kind will be available in every house. The food itself helps to decorate the table. The brown fowl is always in pleasing harmony with the

green of parsley, or cress, and the red of cranberry sauce. A great difference in the taste of the baked potato is made by two slashes made to hold butter and a little parsley. A large share of the joy of Christmas dinner is found in the trimmings.

### CHRISTMAS CANDY.

Miss Bab Bell.

"The gift without the giver is bare," and most people would rather have a nice box of homemade candy than the ordinary purchased article. To make fondant, add  $1\frac{1}{4}$  cups of water and  $\frac{1}{4}$  teaspoon of cream of tartar to five cups of sugar. Stir until the sugar is dissolved but no longer. Cook slowly to the soft ball stage, at 238 degrees F. Wipe down the crystals from the sides of the vessel with a damp cloth wrapped around a fork. When done pour the syrup on a platter. When cool enough to allow the fingers to be held in it, stir with a wooden spoon until it creams. Then knead until smooth. Wet and wring a small towel, place it over the fondant, and allow it to remain there for an hour. This is called the curing process.

Fondant does not become stale when kept for several weeks but improves with age. It may be made up into a variety of candies; plain creams, fudge, stuffed dates, chocolate creams, fruit centers, maple creams, coffee creams, caramel creams, after-dinner mints, cocoanut creams, cinnamon balls. Different flavors, colors, and combinations with nuts and fruits give further variety.

For the creams of different flavors, shape the fondant and work in the desired flavoring. For fudge, when the syrup is placed in a platter to cool, cut the chocolate in small pieces and add to the syrup, let it melt, and when beaten makes delicious fudge. For cinnamon balls, shape the fondant and roll in powdered cinnamon. For caramel creams, flavor with caramel. This flavoring may be made by melting sugar, then adding water, and cooking until it becomes a thick syrup. For chocolate creams, melt bakers' chocolate and dip into it the cold fondant which has been shaped.

After-dinner mints may be made by melting the fondant in a double boiler. Add oil of peppermint to taste, then drop the melted fondant by spoonfuls on oiled paper. Never cook the fondant directly over the fire, but melt over hot water. Keep the top over the vessel so evaporation will not take place too rapidly.

Fruits and nuts are especially good when dipped into melted fondant, and white grapes treated in this way give a dainty touch to the Christmas candy box.

To make nut brittles, melt sugar in a dry pan, allow it to color slightly and pour it over the nuts or cocoanut.

To make divinity, use 3 cups of sugar, 1 cup of water, and  $\frac{3}{4}$  cup of syrup. Cook until it forms a hard ball (248 degrees). Pour it into the well-beaten whites of 3 eggs, add a cup of nuts, beat until creamy, shape into long loaves, and place it on a plate wet with water. Do not use butter as its flavor is not desirable in this kind of candy.

Butter scotch: 1 cup of sugar,  $\frac{1}{4}$



## "John"

"We are almost out of chocolate. Get a 3-lb. can of Ghirardelli's Ground Chocolate. Don't buy the bulk kind."

And John "obeyed orders" cheerfully, for of all the members of the household, John, the "boss," likes his breakfast cup of Ghirardelli's the most.

He knows what a delicious, sustaining beverage it is, what wonderful cakes, puddings and cookies his wife makes with its aid. He also knows that it gives the highest food value for the man who works hard, for the woman who must always be well, for children on the grow.

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ASK FOR TABLE  
AND PRESERVING  
SUGAR.

cup of molasses, 1 tablespoon of vinegar, 2 tablespoons of boiling water,  $\frac{1}{2}$  cup of butter. Boil together until the mixture becomes brittle when tried in cold water; then pour into well-buttered pans.

Pulled taffy may be made of 2 cups

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E. W. BIGGS & CO., 349 Biggs Bldg., Kansas City, Mo.



of sugar,  $\frac{1}{2}$  cup of vinegar, 2 tablespoons of butter. Boil until the mixture becomes brittle in cold water. Turn on a buttered platter to cool. When cool enough to handle, pull.



**Marshmallow Delights.**

One-half cup of sugar.  
One teaspoonful of sweet, thick cream.  
One-half cup of sweet milk.  
One well beaten egg.  
Sprinkling of salt and nutmeg.  
One rounding teaspoonful of baking powder.

Enough flour to make rather stiff batter.

Into this batter drop marshmallows; coat each thickly and fry golden brown in deep, hot fat, as for dough-nuts.

**Pecan Nut Fudge.**

2 cupfuls light brown sugar.  
1 cupful pecan nut meats.  
1 teaspoonful maple flavoring.  
½ cupful cream or milk.  
1 tablespoonful butter.  
Pinch of salt.

Boil the sugar, milk, butter and salt together until it forms a soft ball when dropped into cold water, then stir in the chopped nut meats and the flavoring and stir until it begins to turn creamy. Pour into buttered pan and mark off into squares. Pecan nuts can be used instead of pecans if desired.

**Peanut Chocolate Candy.**

2 cupfuls of granulated sugar.  
¼ cupful of water.  
2 teaspoonfuls of vanilla extract.  
2 squares of chocolate.  
2 cupfuls of roasted peanuts.  
Pinch of salt.

Boil the sugar, water and chocolate together until it spins a thread; then add the nuts and the vanilla. Stir constantly after adding the nuts, and pour into buttered pans. Have the peanuts well roasted and chop coarsely, after removing the brown skins.

**Maple Delight.**

One cup of maple sugar, or two cups of maple syrup, one cup of light brown sugar, one-half cup of water and one teaspoonful of butter. Boil until it forms a firm but not hard ball when dropped in cold water, then add one-half cup of chopped dates and one-half cup of chopped nut meats. Pour this over the stiffly beaten whites of two eggs, until light and foamy. Drop by spoonfuls on greased paper and press a whole nut meat on top of each piece. Let stand until cool.

**Hot Maple Nougat.**

Two cupfuls of maple syrup, one teaspoonful of butter and one-half cupful of chopped pecans. Boil the syrup and butter until it forms a soft ball when dropped in water, add the chopped nuts and stir well. Pour into buttered tins, and when partially cool mark off into squares.

**Marshmallow Fudge.**

One-half pound of marshmallows, one cup of water, two cupfuls of brown sugar, two ounces of chocolate, one cupful of powdered sugar and one-fourth teaspoonful of cream of tartar. Cook all the ingredients except the marshmallows, remove from the fire, add the chopped marshmallows and beat until it stiffens. Pour in buttered pans and mark in squares.

**Peanut Molasses Candy.**

Put all together in a saucepan a cup of molasses, a cup of brown sugar, two large tablespoonfuls of butter and

one tablespoonful of vinegar. Boil steadily until a little dropped in cold water is brittle, then add a cupful of chopped peanuts and beat in the mixture three-quarters of a teaspoonful of baking soda. Take from the fire immediately and pour into buttered tins.

**Coffee Caramels.**

One-half cup of cream, two cups of brown sugar, two tablespoonfuls of butter and three tablespoonfuls of coffee-extract. Boil slowly until a soft ball is formed when a little of the mixture is dropped in cold water. Do not stir. Pour into a buttered tin and mark into squares when partly cool.

**Salted Almonds.**

Put half a pound of almonds in a saucepan, cover with boiling water, let boil three minutes, drain, in a colander and free the nuts from the skins by rubbing in a coarse cloth, or by pressing the nuts, one at a time, between two fingers. Lay the nut meats on a porcelain pie-plate and set them in a warm place to dry, then pour over them one ounce of melted butter, set the pan in a medium hot oven, stir frequently, and roast until brown. Remove, put the almonds in a bowl, sprinkle lightly with salt and one teaspoonful of olive oil, mix well and serve.

**Cocoanut Drops.**

One large cocoanut, grated, one and one-half pounds of white sugar, one-half cupful of cocoanut milk. Boil together the sugar and cocoanut milk. When it spins a thread add the grated cocoanut and boil quickly for ten minutes. Stir frequently with a wooden spoon to prevent sticking. Remove from the fire beat well and drop in small pieces on a wet wooden board (bread board).

**HIS BEST GIRL.**

We witnessed a sight the other night that was a sermon itself. A little sweet faced woman entered the place of worship leaning upon the arm of her son. Carefully he selected a good seat for his mother where she could see and hear well and took his place beside her.

There were a number of young couples present, but we will bet our last shirt that not one young lady in the large congregation was as proud of her escort as was that mother of her son. One's heart voluntarily thrills with delight when a young man, proud of his mother, enters a public place with the queen of his life leaning on his strong arm. Boys, be courteous, more gallant to your mother than your sweetheart. even. Gladden her heart that way often, not forgetting, of course the thousand and one attentions she pays and you so greatly appreciate in the home life. Be a real ardent lover to your mother.

"Dick hugged me last night before I had the faintest idea of what he was about."

"And what did you do?"

"Why, of course, I was instantly up in arms about it!"

The prisoner threw the magazines across his cell in disgust, and cursed eloquently. "Nothin' but continued stories," he growled, "an' I'm to be hung next Tuesday."

## "Ball-Band" Rubber Footwear Makes a Sensible, Valuable Christmas Present



The farmer is the one man who has not fallen into the habit of giving useless things for Christmas.

"Ball-Band" Arctics for men, women and children—"Ball-Band" Rubber Boots, Coon Tail Knit Boots and other "Ball-Band" Footwear mean dry, comfortable feet for the wearer. Why not give it at Christmas?

# "BALL-BAND"

"Ball-Band" boots are vacuum cured. During the vulcanizing this process causes a tremendous pressure on the fabric and rubber and makes the boot one solid piece. Look for the Red Ball Trade Mark. It means more days wear at the lowest cost per days wear.

If your regular merchant does not sell "Ball-Band" write us for the name of a store near you that does.

### Write for Free Booklet "More Days Wear"

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## ORCHARD AND GARDEN

### THE APPLICATION OF

#### GREEN MANURES.

The value of green manure is two-fold. Green clover, when turned in the soil, adds nitrogen directly to the land. Later, when the clover is being decomposed, the carbohydrates which the decaying plant contains serves as a source of energy for the class of soil bacteria that are able to gather free nitrogen, independent of a host plant, from the air into their cells in a form that will be later used by growing plants. Owing to the ease and quickness in which these green crops may be decomposed, the stimulation of the independent free nitrogen fixing bacteria is brought about much sooner than will dry material that is coarse and difficult to decompose.

If during a dry spell the green manure is added in very great quantities, excessive evaporation may result. Experiments have shown that acid produced in the soil from this kind of manuring is not great enough to prevent nitrification.

The farmer must use judgment in selecting the most economical crop for this purpose in his particular section. The one giving a luxuriant growth of leaves and costing but little to grow is desirable. A non-leguminous plant is as valuable in stimulating the free nitrogen-fixing organisms, pound for pound, as the plants of the leguminous family. The fact that a plant is not from the legume family does not keep it from being of value as manure. This form of manuring bids fair to receive a great deal more of attention in the near future — Idaho Experiment Station.

Utah Farmer:

Which is the best distance to have a drill plant grain, 6, 7 or eight inches? About half is farmed dry, but must buy a drill to use on both farms. Can four 1500 pound horses pull a 16-7 or a 18-6 drill?

We wish to make a leveler or float and would like to know how to build one. We now use a two way plow and wish to fill up the old "dead furrow" and tear down the "back furrow."

Publish this as soon as you can as we want to order a drill and build this leveler this winter. Thanking you for any help you can give. I am,

Truly yours,

DAVID HALLS.

Answered by Dr. F. S. Harris.

The width of the drill makes very little difference, since the necessary seed to the acre can be planted with either kind. If your land is dry-farmed, I should prefer the wider distance, but under other conditions one of the others might do as well. Some manufacturers tell of the importance of close seeding in order to have all the land occupied, but roots are able to extend throughout the soil even when the plants are some distance apart.

Four horses weighing 1500 pounds each have no difficulty pulling a drill that seeds a rod at a time.

An effective leveler is made by fastening a number of 2 x 8 planks together in such a way that the edge of one laps above the edge of the one in front of it. The number of planks

to use the length will depend on the soil and power available. A leveler of this kind may be weighted to as needed. Many other kinds can be made for special conditions, but this one is convenient for a number of general purposes.

#### WHAT WOOD IS MADE OF.

Wood is not a solid substance, like iron or stone, but is composed of small, hollow cells, similar to an empty honeycomb. The cells are so small that they can not be seen without magnification, excepting in such woods as oaks ash and elm, which have large "pores" or "open grain." If sections of wood as thin as one-thousandth of an inch are placed under the microscope, the character of even the smallest cells, including the peculiar markings on the cell walls, can be distinctly seen. At the Forest Products Laboratory, Madison, Wis., where the structure of wood is carefully studied for identification purposes and to determine the relation of the structure of wood to its behavior under various conditions, many photographs of wood sections taken through a microscope are on exhibition.

The cells produced in the spring of the year are usually larger than those produced in the summer, so as to afford an easier passage for the sap, which is more in demand in the spring than later in the year. This difference in the size of the cells makes a sharp contrast between the summer wood of one year and the spring wood of the next, producing distinct, annual rings. By counting these rings the age of a tree can be determined.

In the tropics, where the trees grow all the year around, ordinarily no distinct annual rings are formed, and consequently it is impossible to determine the exact age of a mahogany log.

Sapwood and heartwood are two terms used to designate the outer, lighter-colored wood of a tree and the inner or darker-colored wood, respectively. All young wood is light-colored, but as it becomes older it is infiltrated with various substances which discolor it. The dark wood of ebony, black walnut and redwood are striking examples of colored heartwood. The sapwood of all these trees is light-colored. The heartwood is inactive except as it furnishes strength to a tree trunk, but the sapwood conducts the water from the roots to the leaves of a tree. If a tree is girdled so that all the sapwood is cut through, water can no longer ascend in a tree and it will die.

#### MILKY WAY TO COLLEGE.

Three Jersey cows are helping an Ogden boy to get an education at the Agricultural College at Logan. The cows footed it, a distance of nearly 70 miles, the young man taking them with him to help earn a schooling for their young master.

And these three Jersey cows are succeeding in their mission. They are building an education which already is bringing happiness to a little widow and to her son, a young student who intends to build out of his

## A Vacation For the Farmer and His Wife

A GOOD REST AND VALUABLE INFORMATION FOR YOU AT THE

## Farmers' Round-up

AND

## Housekeepers' Conference

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How to Increase Farm Profits.  
How to Improve Methods of Marketing.  
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Personal Hygiene, Physical Culture, Sanitation  
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Lectures and Demonstrations by

## Mrs. Nellie K. Jones

Registration fee \$1.00.

grit and determination, a future for himself that is bound to leave its mark somewhere in the world for still another generation to profit from.

For it was not for themselves the three Jersey cows walked to Logan to earn an education, but for their young master, Herman Ramsperger, now a freshman at the Aggie school.

The story is one that will be written down, some day, in the history of the Utah Agricultural College, for the students of later years to find inspiration from.

Herman Ramsperger, whose widow-

ed mother lives at Ogden with still younger children to support, determined last summer that he must equip himself somehow with an education that would lift him from the rut and open up for him the higher possibilities.

All that Herman had, upon which to depend for support, were the three Jersey cows. He had implicit faith in the cows, and faith in himself. And he looked longingly toward the agricultural college at Logan.

At 4 o'clock one morning the young man started out on the road



to Logan, his three cows looming ahead of him.

At Logan the young man first prepared a home for his three standbys, and then a less roomy home for himself. Then he took his examinations and began his freshman term. Meanwhile he had arranged to dispose of such milk as his cows would provide toward his education, at the depots of the condensed milk plants. The proceeds from the sale of this milk was the foundation upon which his education was to be built, as that money represented his entire income prospects for the four years to follow his entrance into college.

So far the plan is working admirably. The cows are faithful to their trust. Their master milks them himself, feeds them, cares for them tenderly and, perhaps, talks to them something of his plans to encourage them in their productive thrift. He receives from the factories 28 cents per pound for the butter fat averaged by his milk. His monthly receipts range from twenty to twenty-two dollars, and this average will be sustained the year around. He is managing, by the most frugal living expenditures, to make this amount support him through the school term, with a dollar or two being accumulated against emergencies.

The young man's course is being attentively watched by virtually every member of the family. Figuratively at least there will be a laurel wreath for the three Jersey cows when Herman graduates.

#### SUNSHINE A GERMICIDE.

Tests Show That Germs of Disease Can not Survive When Exposed to the Sun.

Sunshine is an amazingly potent germicide for the farm housekeeper and in the dairy and stables. The practice of exposing cooking and other utensils used in connection with food to direct sunlight makes use of this fact, although comparatively few appreciate exactly the work done by the sun in this regard. Probably only those who are acquainted with tests which have actually been made realize how quickly sunshine kills disease germs exposed to it. Hence the following tests may be generally instructive and interesting.

A pasty, creamy mass of tuberculous material which was proved to contain uncountable number of virulent tubercle bacilli, was obtained from a tuberculous cow and spread in thin smooth translucent layers on sheets of glass, pieces of wood, and strips of muslin. Some of the sheets of glass, pieces of wood, and strips of muslin were then placed outdoors on a moderately warm, clear, calm day where the sun could shine on them, and an equal number were placed in a dark room. After 15 minutes exposure to the sun, the tuberculous material on the glass, wood, and muslin still contained large number of living, virulent tubercle bacilli, which were proved to be fully capable of causing tuberculosis, but after 30 minutes exposure to the sun no living tubercle bacilli could be found; every test that could be made proved that they were all dead.

Similar tests with quite large opaque masses of tuberculous material, larger and denser than any tuberculous person is apt to expectorate, proved that the bacilli in such masses on glass are still alive after 4, but

entirely dead in less than 8 hours, and still alive in the material on wood and muslin after 8, but dead in less than 16 hours.

The tuberculous material in thin layers on glass, wood, and muslin, kept in a dark room, was proved to contain fully virulent, living tubercle bacilli after 30 days. The contrast is remarkable, tubercle bacilli of the same kind, on the same kind of material, dying in a smaller number of minutes in the sunshine than the number of days they remained alive in a dark room.

As most varieties of disease germs are more easily destroyed by germicides than tubercle bacilli, and as tubercle bacilli, in the thin layers in which they are likely to adhere to clothing, blankets, rugs, draperies, furniture, walls, floors, etc., are killed by the rays of the sun in less than half an hour, though they remain alive in dark places a month and longer, it is reasonable to draw the following conclusions:

(a) As a general sanitary principle it is desirable that all dwellings, stables, etc., should be so constructed that an abundance of sunshine can reach their interiors.

(b) As a general protective measure against disease germs, it is an excellent practice to expose utensils for handling milk, and milk cans after they have been cleaned, to direct sunlight, and to hang or spread wearing apparel, blankets, bedding, rugs, horse blankets, etc., periodically where the sun can shine on all parts of them.

#### THE NATIONAL CONFERENCE OF MARKETING AND FARM CREDITS

(Continued from page 3.)

townsmen have so successfully adopted. The farmers' form of combination should be the co-operative corporation. This kind of a corporation has for its object the development of business on a democratic basis. It contains the one man—one vote principle; it limits the interest on the share capital to a moderate amount; it provides for a division of profits above this on the basis of patronage, after certain parts of the profits have been set aside for a reserve fund for depreciation and for other necessary purposes to develop the organization to a successful growth.

"These co-operative corporations, should be organized under uniform laws. They should be exempt, as in England, from the income tax, just so long as they remain non-exclusive as to membership; but they should be required by law to submit to regular audits and their accounts should be filed in some public department and be subject to inspection at any time."

He said:

"I do not think you will ever be able to get either the brains or the capital of American farmers properly applied to production until they find some means of escape from a business situation which gives them, to say the least, a precarious hold upon the profits of their industry. The way of escape is no other than co-operative organization."

"Allow me to utter the warning which will have to be faced in the United States and Canada, as well as in the United Kingdom in France, in Germany and in other countries. This relates to the very vital problem of co-operative finance,

"Utah's Most Popular Music House"

## Only a very few days left in which to select YOUR CHRISTMAS GRAFONOLA!

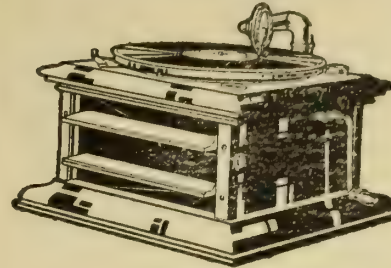
ORDER NOW—WE SHIP AT ONCE BY PREPAID FREIGHT.

Here is the biggest \$25 value ever offered!

If you wish to purchase a low-priced instrument — you cannot afford to overlook this "ECLIPSE" Grafonola — the BEST you could get for the money. Its TONE is simply marvelous.

Price of "ECLIPSE".....\$25.00  
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Outfit Complete.....\$32.80



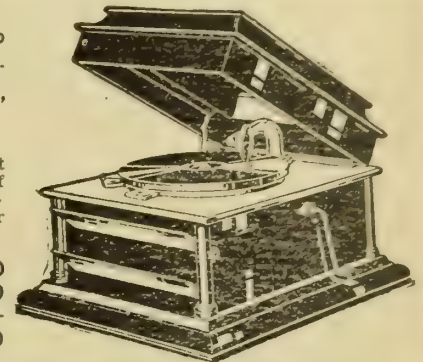
#### The "FAVORITE"

It has been sold for 4 years to more people than any other instrument—regardless of name, price or make.

Such a reputation as that shows merit of the highest. If you want to invest \$50 in something that will benefit your home—here is just the thing.

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12 double disc records..... 7.80

Outfit Complete.....\$57.80



FILL OUT THE COUPON—GET A BEAUTIFUL CALENDAR FREE!

Gentlemen:—Please send me Catalog of the Columbia Grafonola (U. F.) and enter my name for FREE beautiful 1916 Calendar.

Name ..... Address .....

**Daynes-Beebe Music Co.**  
ESTABLISHED 1860  
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"OLDER THAN THE STATE OF UTAH"

both what is called 'long term' or 'real credit' and 'short term' or personal credit.' Finance is, indeed, a vital part of the co-operative organization, and in all forms of co-operation the goodness of the financial system depends on the presence of the true co-operative spirit. There was never a purer embodiment of that spirit than in the ideals of Raiffeisen. No movement ever realized more clearly than the Raiffeisen movement that co-operation to be real and abiding must rest on the spirit of self-help among its members. No movement was ever more independent in spirit. And that lies at the root of all true co-operation. That too, is one reason why co-operation, if properly and purely explained to our people who have been so nurtured on the doctrine of liberty shall yet seize upon and hold their imagination.

"There is nothing more vital for the co-operative movement as it is today and for its future than that it should clearly sound out this note of self-help. Looking not only to the future of America, but at the movement in the old world today, his idea stirs the depths of my feelings that while the state and the voluntary movement must advance side by side, that while the state must give its aid to the co-operative movement, it must seek to secure to that movement the greatest freedom."

#### WINTER CARE OF

#### STRAWBERRIES.

When the ground freezes to a depth of three or four inches, a layer of straw, or some other bedding material free from weed seeds, should be spread over the plants. This holds the frost in the ground and prevents the plants from being lifted out. Remove a portion of the straw next spring when the growth first starts. The remainder may be left to protect the berries from coming in contact with the dirt. If the matted row system of growing the strawberries is used, clean cultivation should be given between the rows throughout the summer to conserve the moisture.

"Well Johnny, what did you learn today?"

"About a mouse, father," replied the small boy.

"Can you spell mouse?" his father asked.

"Father," replied Johnny, after a significant pause, "I don't believe it was a mouse after all; it was a rat."

"Now, tell me," said the teacher in the history class, "who was the mother of the great Scottish hero, Robert Bruce?"

After a long and embarrassed silence one scholar replied: "Please, teacher, she was Mrs. Bruce."

Now is the time to subscribe.



## POULTRY

### PRODUCING THE UTAH COMMERCIAL EGG.

By Edwin Brickert.

The Commercial Egg is produced so differently, by such a different method, and with such a different idea in view, from that of the Fancier's egg, that I have decided to discuss each separately.

By producing a Commercial Egg, I do not necessarily mean the art of feeding the hen to produce this egg; although this can be included, but, I mean by producing a first class Commercial egg, to entertain the following items: Care in selecting the hen that is to lay this egg, feeding her to get this egg, and next but by far not least in importance, is the care of that egg after it has left the hen and get it on the market in a sanitary and salable condition.

To produce a commercial egg, with the greatest degree of success, one should go about it on a commercial or business like way. Make it your occupation, rather than a side line. On both the Pacific and Atlantic Coast, where commercial egg farms are plentiful, better eggs are produced and they demand higher prices than in the central states where the majority of the eggs produced are only the results of the surplus time of the farmer or his wife, and in many cases what the farmers children happen to find behind the hay stack. I do not call this a first class commercial egg, yet many of this kind are placed on the commercial market.

The word commercial means business, or business-like. So to produce a commercial egg, lets do it on a business-like basis.

The first consideration in the production of this egg is the place it is produced. Is this place clean, dry, healthy, sanitary; or other wise? Or is it a place at all? By the last suggestion. I mean that thousands of eggs are produced annually in Utah in hay stacks, fence corners, horse mangers, hogs pens, barn lofts and other places I could easily enumerate. True enough it is better to get eggs out of the different varieties of above mentioned places, rather than in an unhealthy, dark, nasty, polluted, dismal, so-called poultry house. But let me ask the question, are either one of the last two named conditions, business this? Can there be any system to this? No—lets get a business-like house in which to produce a business egg and in a business way.

A clean, warm, airy, roomy well lighted, well ventilated house, with plenty of trap-nests. Plenty of fed and water on hand, a scratch pen with lots of nice clean straw, sufficient labor in charge; is the ideal accommodation for the hen that lays the commercial egg.

Next in consideration is the hen that is to lay this money making egg. First, she should be a hen of a laying breed. Better yet, a pedigreed hen of a well bred up flock of laying birds, with a good record herself and her ancestors should have the same.

To be sure your hens should be of one breed. The main purpose of this is to get uniformity in product. Nothing will sell as good in mixed lots as when all are uniform. If your market favors brown eggs, furnish that

kind. But of your market is as most of them are, it requires white, well shaped, nice sized eggs. My suggestion for your hen is the Single Comb White Leghorn. This hen has been bred more for egg production than any other and you will be more apt to get better laying blood with her, than other breeds which have not had so much time spent on them. However, successful egg forms are operated with other breeds.

The next thing after we have these hens, is to care for them in such a way as to produce a commercial egg.

The first and one of the most important things to remember here, is the "swat the rooster," idea. That is, never have a rooster in a flock of commercial hens. Never sell a fertile egg. In fact many eastern markets will not buy them. In a flock of breeders, when the breeding season is over and the eggs are going to be placed on the market, roosters should be removed at once. In flocks that are purely commercial, male birds should never be admitted. The stronger the chick germ in the egg, the shorter is the life of that egg.

Then these hens must be fed on a balanced ration, such as is best for the high production of eggs. There are many rations equalized for egg production and I am sorry lack of space permits me mentioning any here, but I will in the near future. What is called a narrow nutritive ratio should be fed. A ratio of one of protein to four or five of carbohydrates and fat is a narrow ratio and will give good results in egg production.

These hens should be fed so as to produce as many eggs a year as possible. When a rest is needed, let this be in the summer when eggs are at their lowest tide. The hens can be forced to moult in the late summer and started on their egg routine early in the fall. If properly cared for they will continue this until the following summer.

The next and most neglected part, is the care of the eggs after they are laid.

Not long ago I saw an egg buyer have a sign on his store which read, "2 cents less, paid for dirty eggs." Another had a placard which read, "Please wash all dirty eggs." My advice is to never sell a dirty egg, neither wash a dirty one. My solution to this is—never let them get dirty. It is a well known fact that a hen will not lay a dirty egg, neither will she lay in a dirty place if she has a clean nest with in her reach. Therefore the only way for the egg to get dirty is from a dirty hen.

Again, the solution to this is, keep the hens clean and the eggs will be clean. The hen gets most of the dirt on the eggs from her feet where she is allowed to walk in mud and filth.

Eggs are gathered twice daily on most large plants in warm weather and every two or three hours in colder weather. These should be handled carefully so as to not crack or jar. They should not be placed in a warm place, but where the temperature is about 58 degrees F. They should be kept free from sun and draft.

In producing a first class commercial egg (Continued on page 15)

Following low round trip rates apply from Salt Lake City:

### Home Visitors'

### Excursions

### EAST

Via



December 18 and 22.

Limit 90 days from date of sale.

Denver .....	\$22.50
Colorado Springs.....	\$22.50
Omaha .....	\$40.00
Kansas City .....	\$40.00
St. Louis .....	\$51.20
Memphis .....	\$59.85
Chicago .....	\$59.75
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Proportionately low rates from other O. S. L. points to many other eastern points.

EXCURSIONS DAILY to Pacific Coast points until November 30th. inclusive.

October and November are ideal months in which to visit the Pacific Coast. When you go, go one way via Portland and see the "Beautiful Columbia River Country."

City Ticket Office  
HOTEL UTAH

## CALIFORNIA

WHERE IT'S SUMMER ALL WINTER

San Diego  
Exposition  
Open  
Until  
December 31st.

SPEND THE WINTER  
WHERE YOU WILL  
ENJOY REST  
AND PLEASANT  
WEATHER AMID  
ORANGE GROVES  
AND ROSES.

LONG BEACH  
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ALL FAMOUS  
WINTER RESORTS

Excursion Tickets On Sale Daily. Six Months Limit.  
For information, Tickets, California Booklets,

Call on Local Agent.

Or write  
J. H. Manderfield,  
A. G. P. A. Salt Lake City.





For the Buyer

THE FARMERS' MARKET PLACE

This market place offers our subscribers and readers a very good place to advertise. If you have something to sell or want to buy here is the place to tell it. These advertisements are read because they offer bargains, your bargain should be here. Take advantage of this opportunity today.

For the Seller

THE GEM HERD.

Improved Chester White Swine

The Home of the Western Prize Herd  
My winnings at Idaho State Fair 1913, were 13 first, 3 seconds, champion boar and sow, and champion fat barrow  
At a Tri-County fair held at Jerome, Ida., I took all but one second. I have anything wanted in Chesters from a weaning pig to a champion boar or sow at prices all can afford. High class stock. Write me.  
For Reference—all old customers.

GEO. H. LAWSHE.

Falls City, Idaho

FOR SALE

Foundation Stock in Holstein Fresian's and Duroc Jerseys. Will exchange a few for hay or grain. For breeding and particulars write  
JOHN W. STUBBS  
R. D. No. 2. Provo, Utah.

Percheron Stallion

An unusual opportunity to purchase a good stallion. Foaled June 1913. Utah bred. Sire imported Damocles. Very large and finely developed. Direct all inquiries to B. T., Utah Farmer, Lehi, Utah.

FOR SALE

The best hog and dairy farm in Utah containing eighty acres. Also a few very choice duroc boars ready for service.  
WILLIAM MERRILL  
Richmond Utah

For Sale

One registered Jersey Bull calf. One month old. Cheap if taken right away. An exceptionally bright eyed, long bodied hearty individual, from heavy milking and fat producing strains on both mothers and fathers side.  
DR. WALTER T. HASLER  
Provo, Utah.

BUTTER WRAPPERS

We carry a large stock of the Best Vegetable Parchment Butter Wrappers and Especially Prepared Ink for Printing the same. We furnish them Postage Prepaid at the following Prices, money to accompany order.

100	\$ .90
200	\$ 1.25
500	\$ 3.00
1000	\$ 2.75

Send all orders to  
THE UTAH FARMER  
LEHI, UTAH

BOARS!

FOR SALE

BIG DUROC—JERSEYS

Write your wants to  
PULLUM FARM  
Trenton Utah

FOR SALE.

One year old Duroc Jersey boar, Defender—choice, good stock \$18.00 f. o. b. Payson, if taken at once.  
W. G. ROYLANCE  
Payson Utah

IF YOU WANT  
A BARGAIN  
"SEE ME"

160 acres near R. R. in Idaho, house, stable, water right; some alfalfa; part under cultivation. A snap at \$2250; half cash.  
160 acres, West Jordan. A rare bargain for some one. Only \$20 per acre. 640 acres, part in hay; ¾ of land is fenced; water right for part; a first-class stock proposition. \$16 per acre; \$1500 cash balance easy. Might take equity in good city property.  
320 acres near good town in Sanpete county; modern 9-room brick residence; good stable, sheds; first-class water right; fine springs that could make resort for bathing; most of land in hay, grain and pasture; put in some fine registered milch cows; horses, pigs, farming implements and most of crop. A bargain at \$25,000; terms.  
240-acre improved ranch near Richfield; independent water right; horses, cattle, hogs, chickens, turkeys, implements and some hay and grain goes with this place. Cheap at \$75 per acre; terms.  
GEO. W. DANLEY  
SALT LAKE CITY  
707 Walker Bank Bldg. Wasatch 2989.

Money to Loan

On improved farms with primary water rights, at reasonable rates."

INTER-MOUNTAIN LIFE  
INSURANCE CO.

11th Floor Boston, Bldg.  
Salt Lake City, Utah.

FRUIT AND GARDEN  
FARM.

8 acres—part of the old Central Experimental Farm. Only ¼ mile from Lehi, Sego Lily School and Lehi 4th ward meeting house. A farm on edge of Lehi City Limits. 360 apple trees. Prunes, currants, and gooseberry trees.  
CASH OR TERMS.  
A. F. GAISFORD  
Lehi Utah

RICHARDS' DUROC JERSEYS

WON AT UTAH STATE FAIR, 1915—Grand Champion Boar, Grand Champion Sow, Senior Champion Boar, Senior Champion Sow Eight First Prizes, Five Second Prizes, and Five Third Prizes.  
RICHARDS DEFENDER, Grand Champion Boar was pronounced by many capable judges to be the best Duroc Boar ever brought west. He is 17 months old weighs over 500 pounds. The big type with quality. That's why he has so many admirers.  
We purchased Junior Champion Sow and first and second prize under six months sows, so that we now have in our herd practically every first prize winner at the 1915 show.  
We can make immediate deliveries of young stock, either sex, from this champion herd at reasonable prices.  
Express rates on stock purchased from us is a small item as our ranch is only 135 miles north of Salt Lake City.

RICHARDS' LIVE STOCK COMPANY

VIRGINIA JESSE S: RICHARDS, Manager: IDAHO

FAMOUS O. I. C. SWINE.

Few boars for sale farrowed in April and May 1915 pedigree given. Write for prices.—R. H. CHRISTENSEN, Downey, Idaho.

A beautifully white self-bleaching hard water soap, odorless and will not chap the most delicate hands. I am a hotel man, and it was necessary to find a soap that would bleach, and do perfect work, and not ruin the linen I tried many kinds of soap, but they were not satisfactory, so I began to experiment and after a number of years, I found the secret. It costs a fraction compared with the common soaps. I can make 50 pounds of bar soap for 40 cents. It positively does all I say and is easily made; just follow directions. I will mail this formula to any address on receipt of 25 cents in coin. E. C. Baxter, P. O. Box 421, Idaho Falls, Idaho.

FOR SALE

MARQUIS SEED WHEAT

I have a limited amount of excellent thoroughly fanned Marquis Seed Wheat, which I will sell at \$1.50 per bushel for immediate acceptance and in lots of not less than five bushels, F. O. B. Gunnison. It took first prize at County Fair. It is an early maturing, hard, red Spring wheat and heavy yielder.  
R. MICHELSEN  
467 South 13th East Street  
Salt Lake City.

WE MAKE

Farm and Ranch Loans in Utah, Idaho, Wyoming, Oregon and Colorado.

MILLER & VIELE

303-7 Kearns Bldg.  
Salt Lake City.

BIG POLICE FORCE

"Have you much of a police force in this village?" asked the city man in the country.  
"We certainly have," replied the native; "he weighs 310 pounds."—Yonkers Statesman.

The Grand Theatre

SUNDAY NIGHT ONLY

VAUDEVILLE SHOW

ALL FEATURE ACTS

THE BIGGEST VALUE IN  
SALT LAKE CITY FOR  
10 AND 20 CENTS.

121 East 2nd South  
SALT LAKE CITY, UTAH.

PRODUCING THE UTAH  
COMMERCIAL EGG.

(Continued from page 14)

cial egg, forget about the cold storage—never have anything to do with it. That is, I mean, storing from spring to winter.  
Of course before eggs are placed on the market, all should be graded as to size and color. If my suggestions are all carried out the color will be uniform and size nearly so. However there will be eggs with irregular shaped shells, some light, others very heavy. These should not be put in with good eggs.  
In demanding the top price in anything, bear in mind that uniformity counts a great deal, and of course the better the quality, the better the price.  
There has been considerable complaint issued in the past on the number of spoiled eggs there are constantly on the market. I am sure that if my suggestions are carried out and the eggs are shipped in a proper manner, this ailment will be adjusted.  
In a few weeks I will write on handling, shipping and marketing eggs so that any one who is in trouble on this end of the line, may find relief.

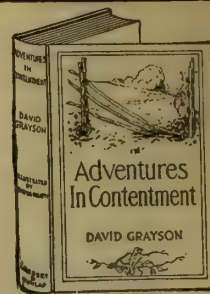
Fat Lady (in the park). I am going to ride on one of the donkeys, and I'll pay for one for you if you like to accompany me."  
Small Boy: "Thaank'ee mum; but I'd rather sit here an' laugh."

Remember Solomon's advice being "train up a child in the way he should grow and when he is grown he will not depart from it."





"There is a peculiar dignity attached to the gift of a book that is in no way affected by its price."



LET US HELP YOU IN THE SELECTION OF THE BOOKS YOU WILL GIVE AS XMAS PRESENTS. SEND US YOUR MONEY—TELL US HOW MANY BOOKS YOU WANT TO BUY WITH IT—FOR

WHOM YOU WANT THE BOOKS—BOY—GIRL—MAN—OR WOMAN—WE'LL SELECT THE BOOKS FOR YOU. WE HAVE DONE IT FOR SCORES OF SATISFIED CUSTOMERS AND WE CAN SATISFY YOU.

## Picture Books for The Kiddies

These we have printed on paper at 5c-10c-25c. On Linen 35c and 50c. On Rag (can be washed and ironed) 15c-25c-50c-75c-\$1.00 and \$1.50. The colors are clear and bright, and your children will like them.

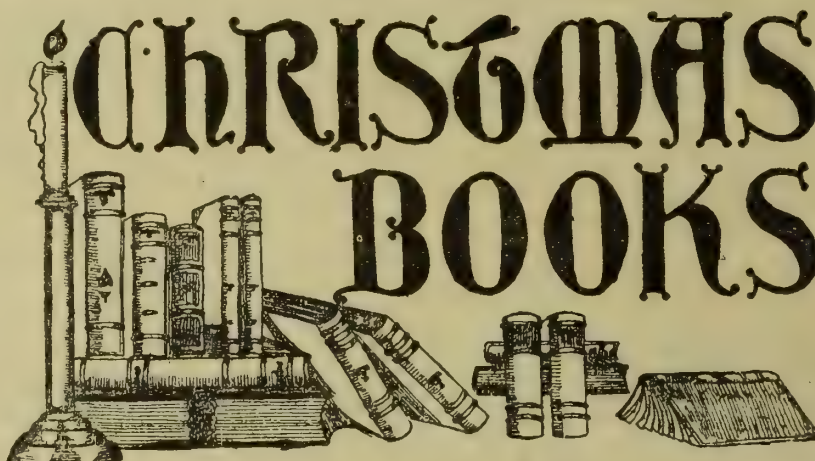
## Story Books For Boys and Girls

For the children who cannot read we have scores of books containing excellent stories that can be read to them. The prices range from 25c to \$2.00 each.

## For Children Who Can Read

They are lithographed in colors on plate paper and bound in lithographed boards. The contents are sentiments from the standard authors. They make acceptable but inexpensive gifts at

15c EACH.



## Dainty Gift Books

Our collection of books in this department is complete—No matter what age we have suitable books at any price you want to pay.

15c TO \$2.50.

GIFT BOOKS IN LEATHER BINDINGS  
50c, 75c, \$1.00, \$1.25 & \$1.50



## Poets

ALL THE STANDARD POETS. CLOTH—50c-75c-\$1.50.  
PADDED LEATHER—\$1.25. LIZARD—\$3.50.  
CRUSHED LEATHER—\$2.00-\$2.50.

NO MATTER HOW FULL THE XMAS TREE—IT IS NOT COMPLETE UNLESS IT HOLDS A GOOD BOOK FOR EACH MEMBER OF THE FAMILY.

SEND YOUR ORDERS TO US—WE'LL BE JUST AS CAREFUL WITH THEM AS IF YOU WERE HERE TO WATCH US

# Deseret Sunday School Union Book Store

44 EAST ON SOUTH TEMPLE  
SALT LAKE CITY, UTAH.



at ag some

# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region

OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE

VOLUME XII; No. 21

LEHI AND SALT LAKE CITY, UTAH

DECEMBER 25, 1915





# Hats Off to 1915

A mighty eventful year has gone! Mother nature, seeming to appreciate the awful havoc wrought on the other side of the Atlantic, has done her best to produce bounteously. The greatest crop in the history of America has been harvested. And Utah has not lagged one whit behind!

Utah's wheat crop for 1915 totaled 8,220,000 bushels. In cold American coin, this represents \$7,068,200—a little more than most of us have handled for a day or two.

If this money were converted into one-half dollar pieces and they were laid side by side, they would extend the entire length of Utah and thirty five miles into Arizona.

## AND WHEAT IS BUT ONE OF OUR CROPS!

The total value of the entire agricultural output of the state is stupendous. It makes mighty clear the power of the farming class.

Since Europe plunged herself into this bloody war, upon no group of people has more responsibility devolved than upon those who till the soil and raise cattle. THE WORLD IS THEIRS TO FEED AND CLOTHE!

The Utah Farmer appreciates this as keenly as ever. During the bright year which now lies at our doors, our magazine has many bright things in store. Its policy will be to place in the hands of every subscriber the very latest information in the realm of agriculture. We are spending vast sums of money to bring right home to you the work of the world's greatest writers—men and women who know.

Every department of our paper will bristle with good things for the home—for the inside as well as for the outside.

Realizing this we feel that you will avail yourself of the advantages afforded by reading the pages of the Utah Farmer.



# Christmas On The Farm

By Theron Bennion.

As we look back we all can remember when we were young. Through the intervening years many things have happened. So many experiences have been crowded into the short span of time that only a few stand out in our recollection untainted by a fading memory. But even though our years might be many and our childish habits long ago placed in the scrap heap of the past, yet there are a few events that dimly show through, and reveal what once to us was all and all.

Let your memory go back beyond youth, aye, even to childhood, when life's battle was yet unknown and care still in the future. Do you remember what the autumn wind whispered to you as it stripped the leaves from the trees and left the ghostly forms to tell with their silence the story of winter's desolation? Do you remember what the first sign of snow whispered as it sparkled in the sun? Did the sleigh bells of early winter bring any tidings, as they jingled a tune to the merry laughter of the joy seekers? Did the chirp of the snow bird and the cherry peep of the chick-a-dee mean else than just a bird song? Did the deep low of the restless cattle as they turned their back to the wind, and ventured a glance at the big stacks of hay, meant else than mere work for future wintry days? As the December days stole on, did you ever seek the fireside and listen, intently listen, to the strange stories told by father or mother? Were these stories ever of old Santa? Do you remember how you scampered to bed, glad in yourself that the morrow would bring Xmas nearer? Do you remember Xmas eve, with your heart beating wildly and your imagination flying with the wind, how you scampered to bed, only to await the first rays of the breaking dawn, when you could venture out and grope your way to the stockings and gifts by the hearth? As the day wore on, do you remember how you got out among the stock of the farm and, with joy in your heart, gave them a little special care? Did you make the crisp air fairly ring with your song as you lightly stepped from chore to chore, thinking what happy times you would have with some new gift that Santa had been so kind to bring?

But these times are past. They have faded into the long ago, and only at times do these memories come back to make us grow almost sad because they have gone forever. Memories of childhood days cause the heart to melt and grow almost lonely. These memories are what caused the old tramp by the wayside to bitterly weep when he picked up a little baby shoe. The thought of home and the happy days it brought are what caused him in anguish to call aloud:



"Oh! make me a child just for to-night."

But even though to us the days of Xmas no longer mean what they once did, it is no reason for lack of interest in the event. There are few farm homes where children are not found, where the stories of Santa are not asked for, where the little ones are not living the life that you lived, but made none the less happy because it is not new. Few of us do or say things that are new.

How would it be to plan for a Christmas on the farm? It matters little just what kind of plan is used, so long as it is appropriate. Some good Christmas stories to pertain to real country life would be profitable. On the farm, children are so far removed from the holiday crowds of the city and from the pretty window displays that some homelike method is necessary to create the proper spirit. Interest shown by the parents will do much to make of this day what it should mean to the child. A few decorations, not costly, but effective, will add much to creating a

Xmas atmosphere in the home. Wouldn't it be possible to have a little program in the home, where the little ones can take part? The Xmas dinner properly planned again can be made pleasant. Above all, that sweet spirit which the day reflects should pervade the home. "Peace on earth, good will toward man," should be the slogan of the day.

Some might say that time is too valuable to spend in thinking of these things. No time is too valuable to

fully planned crop rotation and proper balance of livestock will do much, however, to relieve the pressure from a few months during the summer.

The frequently repeated maxim of a certain successful farmer of the "old school" is "It is a poor farmer who does not have plenty of work to do on his own farm every day in the year." The days of the late fall may be well taken up in properly caring for the orchard, the small fruits, the shrubs, and flowers. Fruits and flowers mean much to home life on the farm. The good farmer sees that all these are properly provided by mulches and other protection to withstand the hard winter. On the condition in which the trees and shrubs start out in the spring depend yields in fruits and flowers.

The late fall is also a good time for a thorough cleaning and disinfecting of poultry cleaning and hog houses, horse stables, and cow barns. It is folly to expect poultry and livestock to thrive in unclean and vermin infested quarters. You need not expect reasonable returns for feed consumed unless you provide clean and comfortable quarters.

The cold weather is now driving the rats and mice from the fields into the farm buildings. Be sure your crops are stored safe from the depredations of these pests. If they are allowed free access to bin and cribs, they will eat much and waste more, the farmer is tested more by how he utilizes his crops than it is by how he produces them.

## A VALUABLE EXPERIMENT.

A very important experiment was started on Monday at the Utah Agricultural college to last three months, the purpose of which is to consider the value of silage in the western dairy ration. It has already been settled in the eastern rations, but due to the fact that the silo is comparatively new in the west, few if any experiments have been carried on to settle it here. Fourteen head of cows will be used in the experiment and they will be divided into two lots of seven each. To one lot will be fed alfalfa hay with grain mixture and the other will receive alfalfa hay, silage and grain mixture, the object of the experiment being to determine which feed will produce the most butter fat.

## FARM ACCOUNTS.

By I. D. O'Donnell.

The field work is over for the season and the farmer is devoting his entire time to the care of his livestock, farm equipment, and improvements.

On the average farm it is not feasible to distribute the season's work evenly over the 12 months. A care-



## DAIRYING

### SAVE THE CREAM SEPARATORS. M. Coverdell.

To those unfamiliar with conditions in and around our rural dairies, it would be a revelation to them if they could see the almost numberless cream separators setting around rusting out because of their inefficiency or total disability.

Manufactured of the highest grade material and constructed upon the most scientific principles, the cream separator ought to last practically a life-time with but a very little repairing—and it would, if the operator thoroughly understood his machine, and applied that knowledge sensibly in his care and management of it.

#### Selection of Separator is Important.

I would not be presumptive enough to try to impress it upon anyone's mind that they should buy the "best" cream separator made. All separators do possess good points, and many of them have very undesirable features, so that it is most important that one make thorough investigation of the various machines before buying.

There are a few general rules that may be profitably observed in choosing a separator. The milk tank should be low down, for convenience in pouring in the milk. The crank likewise should be at a convenient height for turning.

Simplicity of construction and ease of running and keeping clean are of vast importance in the cream separator; there is a wide difference in some machines on these points. The mechanical parts of some machines are too complicated; others run entirely too hard; while still others require too much work in keeping clean.

With so many cream separators in operation, it will prove time well spent for the prospective buyer of a separator to go among friends and neighbors who own machines, and ascertain the merits, as well as the demerits, of the various makes. And in no case should a machine be accepted until it has been taken on trial and given a most thorough test.

One more important point must be borne in mind: In buying a cream separator, one of ample capacity should be chosen; in fact, it is well for one to select a machine with a capacity somewhat above what is really needed at the time of purchase, to make provision for any increase in the size of the dairy herd. Not only

will the machine of large capacity run easier and save time by separating the milk quicker than the one of low capacity, but the working parts of the separator will last longer.

#### Its Operation.

Upon buying a cream separator, one should thoroughly acquaint himself with every working part about it. Read very carefully all instructions of the manufacturer concerning the machine. He, above everybody else, ought to understand his machine well enough to instruct one in its study and operation.

First, the cream separator must be set on a firm foundation. If there is the least movement or looseness of the base of the machine, it will cause undue strain on it, the operation will be harder and the amount of cream secured will be decreased. Where the looseness of the base is quite pronounced, the machine is extremely hard to run, much cream is lost and the separator soon is ruined by the uneven strain.

The cream separator must be absolutely level, else the same detrimental conditions as those just enumerated will result. The cement foundation, with wooden blocks imbedded in the cement for the insertion of lugs or screws in fastening the separator down, from the ideal arrangement. While a regular carpenter's level is best in leveling the separator when setting it up, one can form a good substitute by using a flat bottle, filled with water, laying it on the bowl-chamber.

One of the most important—perhaps the most important—points in the operation of the cream separator, is that of correct turning while separating the milk. A slight variation either way from the number of revolutions to be given the crank during a minute will result in a loss of cream or a product of inferior quality, while the wear and strain on the machine will be greater than with proper turning. We kept a watch at our elbow every minute when separating for several weeks after buying our first cream separator. Even after we had accustomed ourselves to the correct number of turns per minute, we found it well to time ourselves occasionally to prevent possible mistake.

#### Care of the Cream Separator.

Here is a most important item in connection with the owning and operating of a cream separator—one which has a direct bearing on its length of life and general usefulness. Many separators—in fact, a great per cent of them—are slapped up in some old out-building where they soon rust out as much or more than they wear out. I even saw one on the farm of a prominent farmer the other day, which was setting right out on a cement base, in the open air, without a covering or shelter of any kind.

The mechanism of the cream separator, running at such a high rate of speed, not only requires generous oiling, but it must be done constantly, as the parts are quick to cut out if neglected in this respect. Secure a good, straw-colored separator oil, and don't be afraid of using too much of it. Separator oil is much cheaper than the bearings of your separator. Use

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the oil can freely, just before starting the machine, and see that oil supplies are open and in correct running order. Make sure, especially, that all bearings and gearing near the bowl spindle are well oiled at all times, as friction is greatest here. We have found it particularly beneficial to run some kerosene through the various oil channels once every few days, followed by a thorough oiling. This cuts all grease, "gum," etc., from the cogs and bearings.

#### The Importance of Cleanliness.

Not only should the cream separator be kept scrupulously clean for the purpose of promoting sanitation and good health, but in order that the machine may operate easily and do efficient work.

The practice of a great many dairymen in letting the cream separator stand unwashed from one separation to another is to be discouraged. We tried this plan just once, and only once, the results being most convincing, proving the following detriments: Nothing was gained by leaving the machine unwashed, as the dirt, filth, grease and soured milk clung so tenaciously to the bowl, disc, milk and cream outlets, tinware, etc., that it was extremely difficult to remove. Then, the second separation of cream was sure to be considerably contaminated

by passing through all these unclean channels, and the separation was not as thorough as it would have been with absolutely clean machine. We always run from a quart to a half-gallon of separated milk or clear water through the machine at the close of a separation, to flush out the bowl.

Don't let the cream separator set for half a day before washing it, but clean it immediately after separating, using warm water, followed by plenty of scalding water. Set the tinware, bowl and discs out in the sunlight after washing.

### SMILE, JUST SMILE! IT DOESN'T COST A CENT!

Joke with him who jostles you,  
Smile on him who hurries you,  
Laugh at him who pushes you,  
It doesn't cost a cent!

Don't be carrying 'round that chip.  
Wink your eyes and curve your lip.  
And from life's sunshine take a sip,  
It doesn't cost a cent!

Don't be always first to rile  
Your neighbor—give him just a smile,  
It will cheer the dullest while,  
It doesn't cost a cent!

—New York Sun,



## LIVE STOCK

### WINTERING IDLE HORSES.

At this time of the year practically the heavy work on most farms has been finished, and with the approach of winter horses are more or less idle. Since idle horses give no return in labor performed, the feeding should be as economical as possible, and proper care should be taken of the animals in order that they may be in the best possible condition for work in the early spring.

Horses should not be confined to a barn during the winter on a liberal supply of grain. It is far better to "rough" them through the cold months. They should be given the run of the yard or lot during the day. Horses should be provided with a protected shed, one that is thoroughly dry and well provided with bedding. While nature does her part and protects the horse with a heavy coat of hair during the cold months, the feed is necessary in order to afford the necessary shelter and protection against rains, snow, and cold winds. Winter winds come mostly from the north and northwest, and the shed should be so situated and constructed as to give the proper protection from the quarter.

In the feeding of idle horses the high-priced feeds should be avoided in order to keep them in proper condition at the lowest cost. It has been found that idle horses do very well on a winter feed consisting of all the hay, oat straw, cornstalks, or sorghums they will consume, so that little grain is necessary. Idleness also permits a more thorough mastication of the feed, thus insuring proper digestion. From six to eight weeks before the spring work is started the horses should be put at light work and start on a small grain ration in order that they may be in proper condition for the work required of them. The grain ration may then be gradually increased until the regular allowance has been reached for the working season.

Growing colts require considerable protein. They should be so fed as to insure proper development and at a minimum cost. Rough feed, such as clean mixed hay, alfalfa, or clover, may be fed along with a mixture of corn, oats, and corn.

### FATTEN YOUR CATTLE BEFORE MARKETING.

Prof. John T. Caine III.

Many Utah yearling steers are sold to eastern buyers every year. Big profits can be obtained by fattening them before they are placed on the market. An Emery County bank has made 25 per cent by fattening and marketing cattle, even when they had to pay for all the work. Fattened stock for market is a staple product and always finds a ready sale; which is a sure guarantee to bankers who are anxious to lend money to stock raisers.

Stock feeding must be accompanied by stock improvement. Introduce new blood by bringing in good bulls. Cull out the poor specimens and keep the best. You may start on a small scale and work up. It pays. Start with grades and work into pure breeds. One of the most prosperous cattle men of Utah is a native of Denmark

who came into the state with little money. He bought land, then grade cattle, then pure bred. One year he took nine car loads of cattle east and brought back one car load of pure bred stock. He now has a business that nets him a yearly income of \$12,000.

From 1907 to 1915 the cattle in the U. S. dropped in numbers from 51,500,000 to 37,000,000. Some one must supply this deficit. Let it be Utah.

Mapleton.

Utah Farmer: Please answer the following questions in your valuable paper: How many feet does it take for a ton of hay in a barn? What is the difference, if any, between hay in barn and hay in stack, in measuring? Thanking you in advance for the information.

A SUBSCRIBER.

Answered by F. S. Harris.

The number of cubic feet of hay necessary to make a ton varies with the kind of hay, its condition when put up, the length of time it has stood in the stack or barn and the height of the stack. It is, therefore, impossible to give any figure to suit all cases.

There are from 343 to 422 cubic feet in a ton of prairie hay that has settled 30 days or more, but 422 cubic feet is usually considered as closer. For alfalfa, from 422 to 512 cubic feet are used in different regions for hay that has settled 30 days or more. When the hay has settled five or six weeks, 422 cubic feet, and after a year, 343 cubic feet are usually accepted as a ton.

There should be no difference in the barn and stack, provided the shape, depth, etc., were the same.

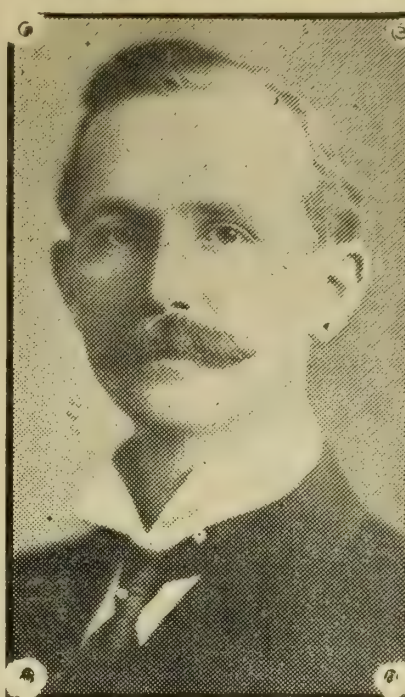
### PIG IS ECONOMICAL.

Every experienced stockman knows that the pig comes first in a list of farm animals as an economical meat maker. This knowledge, in most cases, comes from practical experience rather than from the study of records made in experimental work. In connection with such problems as this, facts and figures are always more or less interesting, and those that are available show strongly in favor of the pig.

In experiments carried on at the Lawes and Gilbert station in England matters of this kind were threshed out to the very bottom. The result of 27 experiments carried on with cattle indicated that it required an average of 13 pounds of dry substance to produce one pound increase in live weight. It was found that sheep required an average of 9.2 pounds of dry substance to produce a pound of gain, while the hog required but 4.8 pounds of dry substance to produce one pound of increased weight. To determine this result 33 experiments were carried on with pigs, and 104 animals were fed out for an average of 58 days.

It is little to be wondered at that the hog is known as the mortgage lifter because, according to these records, he is able to make one pound of gain on just about one-third the amount of dry food as a steer. Of course, it must be remembered that cattle can utilize a much cheaper form of food than hogs. Indeed, reasonable gains can be made with the

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former on foods that would be wholly unfit for hogs, so that in making comparisons the conclusion cannot be reached that the hog is always an economical meat maker and the steer always an extravagant producer. —Farmer and Stockman.

### COST OF PORK PRODUCTION.

Because so many of our Utah people are becoming interested in the hog business we give a brief report of the experiments conducted at the Nebraska Experiment Station concerning the cost of wintering brood sows and the cost of growing and fattening pigs at that station.

By using a large amount of alfalfa hay with a limited amount of grain the net cost of wintering old brood sows is kept at the low figure of \$1.25 each without allowing the sow to become too thin for the best results in raising litters. On a ration containing from one-fourth to one-third alfalfa hay, young brood sows are carried from the pasture fields to the farrowing pens at a small profit and in suitable condition for farrowing and raising fair litters.

The average number of pigs per litter raised from old sows during a period of four years was 6.55, at a cost of \$2.11 per pig weighing 50 pounds. The average number of pigs raised by young brood sows during a like period was 6.2, at a cost of \$1.68 per pig weighing 50 pounds. The fall pig was grown to the weight of 50 pounds as cheaply as the spring pig.

When grazing on alfalfa pasture pigs receiving 2.5 pounds of grain per 100 pounds of their weight daily have gained 0.75 pound each per day. The rate of gain on alfalfa pasture bore a close relation to the amount of grain fed.

The most suitable supplementary feed to corn for fattening hogs seems to depend on several variable factors. Oil meal, cold pressed cottonseed cake, and tankage rank close together

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in the profits secured in nearly all tests. In some tests these by-products give faster gain and more profit than corn and alfalfa, and in other tests the reverse is true. The physical condition of the hogs is influenced by weather and other factors seems to determine whether alfalfa hay or such a by-product as those just mentioned is the most profitable to feed with corn for fattening hogs.

Ground wheat either soaked or moistened gives faster gains with less grain for 100 pounds of gain than corn, but corn gave faster gains with less grain for 100 pounds of gain than whole wheat either soaked or dry. Soaking wheat increased its feeding value only slightly, but grinding the wheat increased its feeding value about one-fifth.

For growing pigs on alfalfa pasture and fattening them when having access to alfalfa hay, a grain ration of corn proved more efficient than a grain ration of two parts corn and one part shorts.

Experiments in cooking alfalfa hay for hogs indicate that the feeding value of the alfalfa may have been increased slightly by the cooking, but not sufficiently to offset the extra cost.

The summary indicates among other items that with corn valued at 60 cents per bushel the cost of feed alone for producing a pound of pork is about 5 cents.

"Some men become ground down on the grindstone of life, while others are polished up. It all depends on their kind of stuff."



## Field and Farm

### Agricultural Lesson XVII. HEAT OF THE SOIL.

Prof J. C. Hogenson.

None of the chemical, physical or biological changes essential to the development of plant food in the soil and to the action of plant roots, can take place in the absence of heat. When the temperature falls below 32 degrees F. nearly all the life processes become dormant. With moist cultivated crops growth does not begin until the soil has attained a temperature of 45 degrees to 48 degrees F. and it does not take place most vigorously until after it has reached 68 degrees to 70 degrees neither do the mitrifying bacteria begin to develop until a temperature above 41 degrees F. has been reached and their greatest activity is reached when the temperature has risen to 98 degrees F.

The best soil temperature for the germination of seeds of various kinds is:—wheat 84 degrees, barley 84 degrees, peas 80 degrees, corn 93 degrees, beans 79 degrees, squash 93 degrees, clover 70 degrees, turnips 89 degrees mustard 81 degrees, melons 99 degrees. The source of heat is sun, the interior of the earth and the chemical action in decaying organic matter. It is transferred to the soil by molecular activity, by the atmosphere and by the falling rain. The more rapid the molecular action the higher the temperature.

The temperature of soil is determined, 1st by its specific gravity. The heavier a soil the lower is its temperature.

2nd by the specific heat of the soil. When the same number of heat units are applied to like weights of different kinds of soil, their temperatures are not raised through the same number of degrees, because their specific heats are different. The number of heat units required to raise the temperature of 100 pounds of water and 100 pounds of soil of different kinds from 32 degrees to 33 degrees F. is as follows:

	No. of heat units required to raise 1 degree.	Temperature after applying 100 heat units
Water	100.00	33.00
Humus	20.86	36.79
Sandy Humus	14.14	39.07
Loam	16.62	38.02
Clayey Soil	15.79	38.33
Pure Clay	13.73	39.28
Sand	10.08	41.82
Chalk	18.48	37.41

3rd. The color of a soil has a marked influence on the temperature. Wolly made a series of experiments to note the effect of color, using white marble dust and lampblack in different proportions. Black 32.82, dark grey 32.39, medium grey 31.98, light grey 30.94, white 29.16. The darkest soil being the warmest. Usually a dark colored soil is preferable to a light colored one, and usually, also, it is more fertile.

4th. The degrees of inclination of the land surface and the direction of the slope exert a marked influence on the temperature of the soil. A southern exposure is warmer than that in any other direction because the south

slope receives more direct rays from the sun on a unit of space.

5th. The water content of the soil influences its temperature, the more water it contains the lower its temperature, because it takes more heat to raise the temperature of water than soil, and also because when there is much water in the soil some is continually evaporating from the surface which cools the soil and keeps down its temperature.

A warm soil is one which contains but little water and hence the evaporation is less. A cold soil is one which contains much water and where evaporation is great. A late soil is one which contains considerable moisture and where the exposure is in a northerly direction so that it does not get the vertical rays of the sun. An early soil is one with a southern exposure and which does not hold a great deal of water.

We may modify the temperature of a soil by changing the water content. Drainage is the most effective method of warming a soil which is naturally too wet and cold. We may modify the temperature of the soil by changing the color, which is done by adding organic matter which darkens it, thus causing more heat to be absorbed. We may modify the temperature by cultivation. Deep cultivation warms the soil by loosening it, and thus allowing the warm air and sun to enter more freely. Rolling has the tendency to warm the soil due to the better conductive power of compact soils because of their more firm texture. This is in spite of the loss of heat due to the greater evaporation which takes place from the rolled surface.

ROLLED	NOT ROLLED
5—6 a. m.	5—6 a. m.
Surface 59.1	Surface 58.9
1½ ft. 64.7	1½ ft. 60
3 ft. 62.3	3 ft. 61.5
2—4 p. m.	2—4 p. m.
Surface 80	Surface 81.6
1½ ft. 85	1½ ft. 80.5
3 ft. 78.7	3 ft. 73.5
11—12 p. m.	11—12 p. m.
Surface 55.2	Surface 55.9
1½ ft. 64.5	1½ ft. 63
3 ft. 67.5	3 ft. 65.8
Average	Average
Surface 64.8	Surface 65.5
1½ ft. 71.4	1½ ft. 67.8
3 ft. 69.5	3 ft. 66.9

A thorough preparation of the seed bed decreases the capillary rise of cold water from below and hence, also, its loss by evaporation from the surface of the soil. This tends to concentrate the sun's heat in the seed bed itself, first by lessening its rate of conduction downward and, second, by diminishing its loss by lessening the evaporation. This makes the seed bed warmer, diminishes the loss of soil moisture, increases the formation of nitrates, hastens and makes stronger the germination of the seed planted. There is much to gain and little to lose by thoroughly preparing the seed bed before planting.

The salesman who makes the most sales is he who is as wise about keep-

ing still at the right time as about talking at the right time.—Farm Machinery.

### PRINCIPLES OF AGRONOMY.

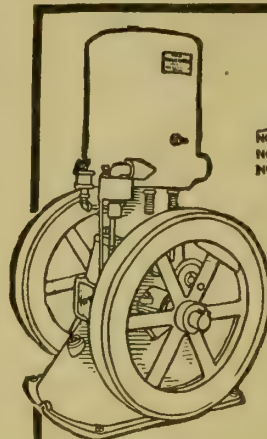
This is a text-book for High Schools and short courses, written by Dr. F. S. Harris and George Stewart of the Agronomy staff of the Utah Agricultural college has just appeared from the press of McMillan company. It is one of the "Rural Text-book Series," edited by L. H. Bailey.

The book is written in a clear, readable and entertaining style, suited especially for students of high school grade and for the practical

farmer. All sides of agronomy are treated in the volume, including soils, crops and field management, and are arranged in a very pleasing manner.

Previous to the appearance of this book, students in most of the high schools were obliged to purchase two or three books for a course in agronomy, one for soils, another for crops, and still another for farm management.

Although written mainly for the inter-mountain country, this book can be used in any agricultural school as it deals with the New England soils as well as those of the west or Mississippi.



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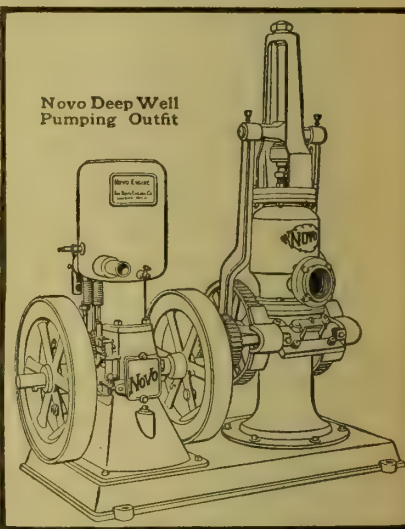
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## WHY DRAIN THE SOIL?

E. O. Fippin, Professor of Soil Technology, New York State College of Agriculture.

The public attitude toward land drainage, especially that part of the land not classed as swampy, is one of doubt and uncertainty. To a very large extent this same feeling permeates the mind of the average farmer. He sees in pools and puddles of water in the field a miry place, an unsightly spot, something that he would correct if it were easy and convenient, but as a rule he does not regard these pools in hollows and cow tracks as having any broad significance, as being more than locally important. They do not represent to him a symptom of a general condition that needs correction. Hence, many farmers go on splashing through the wet spots, largely unconscious that a large part of the land adjacent to those spots is like a flooded cellar in which all sorts of uncleanness and foulness and plant-discomforts, figuratively, float about, to the detriment of the crop.

The popular mind has been aroused by the general movement in favor of agriculture, to look at the open marsh and swamp land, and to favor their reclamation, and in this direction there is more activity at present than in any other direction in land development. All this activity is good, even if it is often actuated both on and off the farm by purely selfish motives rather than from a sense of the general welfare.

Back of this entire attitude of mind is a general unconsciousness of the underlying reasons why thorough drainage of the soil to a considerable depth is of such fundamental importance. Having such a basic relation to the soil for plant growth, drainage is a practice of really much greater importance when applied to the existing farm lands than when applies to the marsh land—useful as that may be. On the swamp lands the direct loss is only the small amount represented by the interest and taxes on its present market value. There is no expenditure for labor, seed, and perhaps fertilizing materials. On the other hand the wet lands in farms that are regularly tilled suffer annual loss in the labor, seed and fertilizing materials which do not pay for their expenditure or give only a very small return, where good profit might be secured. The operation of the effects of drainage to produce these results goes on out of sight in the subsoil.

Understanding the numerous effects of drainage on the soil enables one the better to recognize those soil conditions that need such treatment.

A wet soil may be defined as one where water will stand in holes reaching into the subsoil for more than two or three days at a time. To a considerable extent this applies to the winter season as well as to the summer season.

The following twelve effects of drainage may well receive careful thought by every farmer and his own land studied in the light of them:

1. Drainage removes the excess free water and firms the soil. A wet soil is a soft soil because the water floats and lubricates the particles and makes them movable. Hence, one mires on wet land. Hence, also, drainage is one of the most fundamental requirements in road building. On the farm it means that drained land will bear

larger loads, especially soon after a rain. In critical seasons this may be the determining factor in gathering the crop, as is well recognized by many farmers in this 1915 season of unusual rainfall.

2. Drainage promotes the development of a favorable granular or crumb condition of the soil. Every soil should have the opportunity to dry out somewhat thoroughly, certainly to a medium capillary or film condition. This results, in heavy soils, in checks and cracks that cut the soil ultimately into small granules especially favorable for plant roots. On the other hand, continued or frequent saturation breaks down these granules and develops a puddled, cloddy condition that is anything but profitable. The first requisite to keep the soil in good physical condition is good drainage, surface and subsoil.

3. Drainage improves the ventilation of the soil. The removal of the excess water from the larger pores in the soil permits the admission of air—an absolute requisite not only for most plant roots, but also for beneficial organisms in the soil. The roots of most crops will only penetrate where they can secure the needed air. True it is that roots will sometimes penetrate a little way into a saturated soil, but it is only a very little way and is measured by the depth to which the water is aerated. Wet land is especially likely to be wet in spring and early summer. This induces shallow rooting and later in the season, when the water runs low, the roots do not follow and the poor physical condition of the soil does not encourage its diffusion. Hence, the crop suffers. Very often the crop curls and shows the effect of drouth in the very place where the land was wettest in spring.

4. Good drainage increase the amount of film water available to crops. It is a well-known fact that on drained land crops stand dry weather better than on poorly drained land. Several reasons may be assigned for this. Such land often has a better subsoil supply to replenish the film water used by crops. The improved physical condition increases the amount of available water retained in the root zone and finally the deeper rooting of the crop puts it in closer touch with a larger supply of moisture.

5. Drainage warms the soil. Warm or cold soils are determined by their water content. Clay is said to be cold and late because it normally retains more water than sand. The excess of water resulting from poor drainage keeps the soil cold in the same manner and often greatly shortens the seasons. This is brought about in two ways: first, the head capacity of water is about twice as great as soil for equal bulk. Second, water is subject to evaporation, which increases in proportion to the water present. This vaporizing process is a tremendous heat consumer since, for a pound of water, more than five times as much heat is required as would be required to change its temperature from the freezing to the boiling point.

Since the source of heat is the sun, and the rays are the same for each acre, the wet land is the slower to get warm enough for plant growth.

6. Drainage favors all those bacteria that live in the soil and contribute to fertility. This includes the decay of organic matter to form humus. It

also includes those organisms concerned with the nitrogen supply—both its transformation into available forms and the tubercle bacteria that live on the roots of legumes and derive nitrogen from the air. Success with legumes largely depends on good drainage.

Drainage increases the total supply of available plant food. This results from the better moisture conditions, the better ventilation and biological activity, from the higher average temperature and from the deeper rooting of the crop. Drainage is like opening up a new mine, the subsoil mine, in its effect on plant feeding. It is the basis of deeper farming.

8. Drainage reduces heaving or the lifting of winter crops by frost action. It is the expansion of the freezing water in a saturated soil that causes this damage and its repetition gradually lifts the plant roots out of the ground. It is especially damaging to tap-rooted plants, such as many of the legumes.

Drainage by removing the excess water and by favoring a more granular and spongy condition, causes that expansion to be taken up within the soil mass without the injury of heaving.

9. Drainage lengthens the season by putting the land in condition for working earlier in the spring. Ten days or two weeks are frequently gained in this way, and for crops that should start in the cool of the early spring, such as oats and potatoes, this is especially helpful.

10. Drainage increases the efficiency of the farm equipment. Not only can work be started earlier in the spring, but it may be kept up more continuously. Less equipment—less teams, plows, harvesters and men—is therefore required, and its operations are more effective, since a drained soil works better than one inclined to be wet and soggy.

11. Drainage reduces injury by erosion by permitting the water to pass away beneath the surface instead of over the surface. In the southern states, where terrace farming is practiced, this is especially beneficial.

12. In the far West, where irrigation is the dependence and where alkali is a constant menace to lands of high value, drainage has been found to be the means of reclamation and the insurance against its development. By permitting the free percolation of the excess water with its burden of soluble salt and by keeping the water-table low enough to reduce evaporation and permit the maintenance of a good mulch, almost any land can be kept in good condition. The practice of underdrainage is spreading.

This list of an even dozen benefits does not exhaust the effect of good drainage but it is a bouquet that any farmer will appreciate. Nature has been either prodigal or parsimonious in the drainage of her domain. Man must supplement her work.

While there is something like 100,000 square miles of swamp land of all kinds in the United States, there are nearly 200,000 square miles representing about one-quarter of the improved land in farms that are in need of more or less drainage, ranging from a few laterals to a regular system. This estimated proportion is believed to be low, but it gives some idea of the job.

Open ditches, tile drains and wells, dug, drilled or made with explosives, may all be used to effect the drain-

## Securing Perfect Results With Perfect Sugar

If there is one thing more than another a housewife likes, it is to have her cooking, cake frostings, home confections, etc., to turn out "just right." There is always a feeling of pride and satisfaction in securing perfect results in these arts.

Modern housewives have learned the folly of expecting inferior ingredients to produce perfect results in articles of food.

Since sugar is used in practically all cooking it should have protection against contamination. It should come from clean factories where the strictest rules of sanitation are adhered to.

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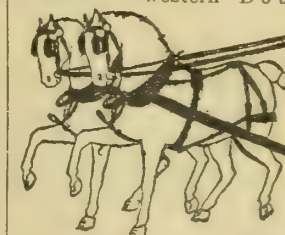
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age. The crisp grass, the ripening grain and the luscious fruit will spring from such drained soil. Good soil drainage is the foundation of good farming.

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#### OFFICIAL ORGAN

Utah Horticultural Society, Utah State Dairymen's Association, Utah State Bee Keepers' Association, Bear River Valley Farmers' Protective and Commercial Association, Agricultural College Extension Department and Utah State Fair Association, Utah-Idaho Millers' and Grain Dealers' Association, Utah Fruit Growers Association.

#### OUR GUARANTEE

We guarantee every subscriber against loss thru dishonesty or attempted swindle by any advertiser in this publication. We do not attempt, however, to adjust trifling differences between the subscribers and honest, responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within thirty days from date of the transaction, and the subscriber must have mentioned Utah Farmer when writing the advertiser.

Too often we judge our neighbor, when, if we knew more of the conditions that brought about the circumstances we would have given a different opinion.

No doubt when this copy of the Farmer reaches your home many of you will be visiting with relatives or friends, or this may find someone visiting in your home. This is the season of the year when we should strive to make each other happy. See that you do your part.

Some of our farmers are waking up, are getting together, and are discussing the question of taxes. There seems to be every reason why the farmers, who are in the great majority in this state, should take an active part in this important question. According to the auditor's report which was given out last week, the past legislature gave orders to spend more money than what our revenues will be, even from the high taxes we are now paying. We are having prepared, and will publish them in the Utah Farmer, some articles dealing with this question of taxes.

#### ATTEND THE ROUND UPS AND

##### FARMERS' INSTITUTES

The Agricultural College and County Demonstrators, and also many local organizations are featuring Farmers' Round Ups and lectures. Whenever possible, we should attend these meetings and take part in the discussions. At these

meetings farmers are able to get the service and opinions of experts, and of the farmers themselves. No matter how successful a farmer may be, none of them have reached the point where he may not learn something by coming in contact with some of his neighbors. To be successful in farming, it requires a knowledge of soils, climatic conditions, plant life, proper selection of seeds, and a more careful preparation of seed beds, also the cultivation of these crops while growing. The question of stock raising, the best breeds, the question of diseases, the right kind of feed, all of these, and other problems can be discussed at these meetings. You need the technical advice which is going to be good and helpful, you will also be able to get, by meeting together, the right experiences of farmers who are doing things.

Everyone interested in farming should attend these meetings or institutes, that are held in different parts of the state. Go with the idea of being able to help others, and in so doing, you will encourage yourself in this important business of farming.

#### WHAT A DOLLAR WILL BUY.

We want to emphasize the importance of your renewal to the Utah Farmer. One dollar pays for a year's subscription of fifty-two numbers—close to nine hundred pages—of reading matter, which comes to you at different seasons of the year with helpful ideas and suggestions as to how you can overcome the problem that you have to contend with. We have already arranged for a number of special articles to be written by experts and practical men, dealing with local conditions such as drainage, farm machinery, potato problems, and many others.

We have been doing some thinking for you, and have planned for the coming year so many good things that you cannot afford to miss any of them.

Only this week a subscriber told us that an article in a recent issue of the paper was worth \$2.50 to him. He says he gets his money's worth out of each issue.

Right now is the time to renew your subscription. You have no doubt received a letter from our office asking you for a renewal, and telling you the amount you are owing us. Start the new year right by sending in your check today for 1916, and get the biggest dollar's worth of information and helpful suggestions about your farm that you could buy.

#### SHEEP MEN'S CONVENTION.

The Sheep Men's Convention, which will convene in Salt Lake on January 13 to 15th, promises to be one of the largest from point of attendance, and the most educational, of any yet held. One carload of exhibits is coming from Chicago, which will show the wool industry in all stages including—samples of the finished products made from wool.

A modern shearing shed will be a feature of the exhibition, also exhibits showing how the grading of the wool is done in preparing it for market.

The program has been planned and decided upon by the National Sheep Raisers' Association. A representative of the Government will discuss the question of the coyote, another will discuss our National Forests. Dwight B. Heard

of Arizona will speak on the subject "Public Domain" Professor Marshall, of Washington D. C., will give a report of his trip to Australia last year. Mr. Clifton of New Zealand will tell about the sheep industry of his country; Mr. Ellenwood of California will speak on the subject, "Handling Sheep on the Range."

Special railroad rates will be given for all attending this convention.

The sheep industry of the west is an important one, and no doubt this will be a very successful convention.

#### MARKET ORGANIZATIONS.

In making their report the office of markets and rural organizations says that "the conclusion seems warranted that in communities where co-operation is practically applied to the farmer's business, the results obtained are far more satisfactory than those secured by individual methods." It is estimated that farmers' co-operative marketing and purchasing organizations will transact this year a total business amounting to more than \$1,400,000,000. Agricultural co-operation in the United States is, therefore, far more prevalent than is generally believed, but is not yet upon a sufficiently strong business basis. Studies have been made of the various methods employed by these associations and they worked to devise means by which these methods can be perfected.

We are awakening to the fact that marketing is one of the important things in the farming business. During the winter an effort should be made by everyone to study and learn of the different organizations that have been successful, and if failures have occurred, profit by the mistakes of others. There are many problems to work out along this line, and every farmer should keep in touch with what is being done. Why don't you write to the Agricultural Department of the U. S., Washington, D. C., and tell them to send you what literature they have that deals with these important questions, and then read them while you have the time this winter.

#### MAKE A SKATING POND.

It will only take a little time and effort to make a skating place for the youngsters. There is many a vacant piece of property on the farm or in our smaller towns where irrigating water could be turned onto and it will freeze. The following day the water can be turned on again, and this repeated for one or two evenings while the weather is right cold, and you will then have a safe place for the youngsters, (and for the older ones, for that matter) to enjoy the healthful sport of skating.

We can all remember when we enjoyed this out-of-door sport, and if you do not provide a place, your young people will go where they can find skating, and oftentimes the place they find is dangerous because of the deep water, or hidden springs that prevent the ice from freezing as hard as it does in other places.

Find a place in your town, and make a public skating rink. The sport is healthful and invigorating, and many of the skaters perform feats of skill on their skates. We are sure that if you will act upon this suggestion it will please the "kids" and provide wholesome amusement for them, in a good place where there is no danger of drowning should they break through the ice.



STANDARDIZATION OF  
FARM PRODUCTS

Charles J. Brand, Chief of the Bureau of Market, U. S. Department of Agriculture, before the National Conference on Marketing and Farm Credits.

Standardization of farm products as to quality and as to size and type of package is necessary as an accurate basis for price quotation. Accuracy of standards in selling products means a smaller margin between the price paid by consumers and the price received by producers. Poor qualities and ungraded products were ruinous to the whole market. Lack of standardization as to packages afforded opportunity for dishonesty. Standardization of containers is a proper subject for federal legislation under the weights and measures power of the constitution.

In marketing and distributing farm products, two great purposes can be served by a thorough-going system of grades and standards. These are the furnishing of an accurate basis for price quotation, and, related thereto, the furnishing of an adequate means for the dissemination of market information.

We can never have much progress until the buyer and the seller are discussing the commodity in the same terms, and that means that we must have grades and standards not only as to quality, but as to packages and containers. I think it is true that the greater the accuracy of the standards by which products are sold, the less the margin between the price received by the producer, and that paid by the consumer in the case of non-manufactured products, or by the manufacturer in the case of products which must be worked into consuming condition.

One of the investigators of the office of markets and rural organization found on the Chicago market, based upon observations made between September 15 and December 5, that approximately 25 per cent of the carload bulk arrivals of apples, amounting to about 350 carloads, and about 10 per cent of the barrel shipments, equal to 160 carloads, were so low in grade and quality that they would not have reimbursed the freight charges had this kind of fruit been received in straight carload quantities.

The shipment of poor qualities and ungraded product is ruinous to the whole market, both the good fruit and the bad. The most rapid development in the adoption of uniform grades and packages of fruits has been made in the states of the West, where population is sparse and distances from market great, with high accompanying freight rates. Under these conditions the shipper cannot afford to send to market anything except those qualities that will command high prices.

Not the least important of the questions of standardization are those that relate to the packages themselves in which commodities are transported or sold. In order to get an accurate idea of the diversity which prevails in this regard, Mr. C. T. More, who is in immediate charge of the work in grades and standards for fruits and vegetables, has made a collection showing the size and types of packages and containers current in the trade. I assure you it is a motley horde, and is,

in itself, a complete argument for standardization. No consumer could ever hope to know what he is getting in quantity in buying grapes. New York has one set of grape baskets, Michigan another, and still other grape territories other kinds. Some of them look very much like others, but contain less. Such confusion furnishes endless opportunity for manipulation, and even dishonesty. In the case of strawberry boxes, not only is there exceedingly great variation in the cubic contents, but it is a common practice to repack from containers of greater capacity to those of less in distributing in and to the retail trade. Likewise with peaches. The successful commercial orchardist packs his peaches in the 2-1, 2-2 and 3-2 packs, according to the size of the fruit, particularly in the popular and generally-used Georgia carier baskets, and often when he buys his own fruit he finds that where he had packed as high as 36 to 45 in each of the four-quart baskets, the retailer has repacked them so that he will buy from 19 to 25 peaches in the same basket.

"Standardization of container's is a proper subject for federal legislation under the weights and measures power of the constitution. Congress has recently used this power in establishing the standard barrel for apples, cranberries and certain other fruits. By virtue of this legislation the containers covered by what is commonly known as the Tuttle Bill became standards of measure with the same force and legal effect as the bushel. This act becomes efficient July 1, 1916, and applies to intrastate as well as interstate commerce. Undoubtedly this barrel will replace a large number of short measure packages, which are used for potatoes, truck crops, fruit and other things, and which vary in capacity from two bushels up to ten or twelve pecks. The standardization of apple boxes, berry crates and cups, and other containers, is under consideration, and we may look forward to progress with reference to these. In some cases, even in the same state, there are dual standards applicable to the same products.

The MOTHER and CHILD at birth need skilled and careful attention. You can have care from those who have spent and are spending a lifetime preparing and perfecting division of hospital work.

Not alone the professional side but as well the equipment and tools and material for this work recieve our attention.

"Come and see our home hospital."

THE SALT LAKE MATERNITY HOSPITAL  
447 South 3 East Street.

Miss Gertrude Tobiason in charge, a graduate of the Battle Creek Sanitarium and hospital.

In New York are two sets of standard grape baskets. Legislation has been placed on the books in a number of states, and is under consideration in others, particularly New York, Maine, Massachusetts, Connecticut, Vermont, and some of the western states, which will tend to uniform trading in numerous products.

"The opportunities for standardization of grades and their application to products is greatest under conditions of organized production. Reciprocally, likewise, the possession of standards and grades yields through better market returns the best dividends upon organization. The department of agriculture is working earnestly upon many of the problems related to grades and standards, and will welcome suggestions and assistance from producers, shippers and others that will lead to further improvement along these lines."

VALUE OF A GOOD NEIGHBOR.

Who but a farmer really knows what a good neighbor stands for? We people on the farm certainly can test each other's friendship. When there are "feelings" between neighbors it seems as though the sun doesn't shine half so bright, and "everything goes wrong." When one neighbor can say to another: "Say, Bill, I want to borrow your harrow today; mine got broke the other day and I haven't had time to fix it" and Bill can, with good fellowship and willingness, say: "Sure y'u can"; one can easily see that a spirit of good neighborliness exists between those two farmers, and that they are willing to help each other in times of trouble.

On the other hand, if neighbors are not on speaking terms, they would not ask each other for an accommodation, and if each lack certain tools which the other has, and refuses to loan them, it will work a hardship on each.

A farmer's wife well knows the value of good neighbors, and they and their husbands can ill afford to lose neighbors' friendship.


A community of neighborly farmers can accomplish wonders when it comes to building a road, a dam, or anything for the public welfare. A recent saying is that "good fences make good neighbors, and good neighbors make good fences." This saying ought to be printed and hung on the wall of every farm house, so that farmers might take a tumble to themselves and help to create a spirit of good fellowship and neighborliness in every community. Any one can do it if they will but do their part and help their neighbors to be good neighbors, and thereby make themselves and every one with whom they associate happy and content.

With the hope that we may all become neighborly neighbors, I subscribe myself, SUE.—Exchange.

"KITCHEN KUMpany."

To make a success of "kitchen kumpany," a jolly Christmas game, the "kumpany" should consist of eight to ten girls and boys who are all intimately acquainted.

Have ready a large bowl of batter for pancakes. Each boy is provided with an apron and told to cook a cake. His partner, a girl, may stand by and instruct him, but she must not take a



Purity  
Quality  
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Baking Powder

The popular baking powder at  
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**25c**

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Sugar made at home is 100 per cent pure. It is cheaper than the foreign kind. Table and Preserving Sugar is suited for the table, for cooking, baking, canning, preserving, candy making and other purposes.

**ASK FOR TABLE AND PRESERVING SUGAR.**

**AGENTS!**

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Selling our new and unequalled Lanteins, Portables, Hollow Wire Systems and Gasoline Devices for Lighting City and Rural Homes, Stores, Halls, Churches, Most Powerful Light Known.

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Absolutely safe. More brilliant and many times cheaper than gas or electricity. Guaranteed five years. Everyone a possible customer. Send for free illustrated catalog. Large commissions. Exclusive territory free.

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SALT LAKE CITY, UTAH

hand in the cooking at all.

The couple making the best cake receives a prize. Then there can be candy making, such as chocolate or nut fudge, and when all the cakes are baked the kitchen table is set and the guests eat the fruits of their labor.



## THE HOME

### CHRISTMAS DINNER.

At Christmas time—like Thanksgiving—it is essentially a family festival. Our modern Xmas dinner is, as a rule composed of more dishes than is necessary. The simpler the preparation for the Xmas feast the better. In most of our homes the serving is done by members of the family and they should be considered in the preparation and serving of the meal. Do not have too many courses, have this thought in mind the pleasure and enjoyment of mother, on whom, in most cases, the responsibility of serving the meal depends. It is the one time when all members of the family should enjoy themselves.

The decoration of the table will add much to the enjoyment of the dinner, and there are many ways of adorning it without the expenditure of very much capital either in the way of time or money.

For instance: Spread a sheet of cotton batting in the middle of the table; if it is a little irregular in shape it will be all the better and more natural in appearance. Make little drifts here and there by pulling tufts of the cotton up into heaps. Now place at one end a small sleigh and attach to it with ribbon reins a small figure of Santa Claus driving his "tiny reindeer." These can be bought at the ten-cent store. The sleigh can be piled with fancy mottoes and a miniature Christmas tree should be placed on top of all.

Or a small brick chimney can be fashioned from a square box covered with paper, colored and marked off to simulate brick, and Santa can be just ready to go down the chimney with his pack on his back.

#### Dixie Pudding.

- 1 Cup of Stale Bread Crums.
  - ½ Cup of Flour.
  - ½ Cup of Chopped Beef Suet.
  - ½ Cup of Molasses.
  - 1 Egg.
  - ½ Teaspoon of Cinnamon.
  - 1 Cup of Raisins.
  - 4 Teaspoon each of Cloves, Mace and Nutmeg.
  - 1 Cup of Grated Sweet Potato.
  - ½ Teaspoon of Salt.
  - 1 Cup of Milk.
  - 1 Scant Teaspoon of Soda.
- \* Chop the suet fine; seed the raisins; peel and grate the sweet potato. Place all these ingredients in a mixing bowl; add to them the bread crumbs, also the flour, spices and salt sifted together. Next beat the egg lightly, white and yolk together, and add these with the molasses to the dry ingredients. Dissolve the soda in the milk and use to moisten the pudding. Stir and beat all well together; then turn into a greased mold and steam for three hours. Serve with either hard or liquid sauce.

The Home Economic Club of Cedar City observed Electrical Prosperity week with a special session, at which a program was given devoted to the subject of electricity. Instructor P. P. Dalley of the B. A. C. chemistry department lectured on the origin of electricity and its application, giving interesting demonstrations with magnets, cells, dynamos, X-ray machine

and other electrical apparatus. Mrs. Roy Homer read a convincing paper on "Electrical Devices for Farm and Home." Mrs. Patty Saarp discussed the life and works of Edison, and the session closed with an electrically cooked luncheon demonstrated by Miss Almeda Perry of the B. A. C. domestic science department, and served by students of the department. This splendid program, combined with a big attendance of enthusiastic club members, combined to make the meeting one of the best in the history of the club.

#### BROWN'S IN TOWN.

The players sit all around the room. One person comes around to each and puts a number of questions, which must be answered without saying Mr. or Mrs., white or black, yes or no. The game begins something like this: Mr. Brown has come to town to see what you have to give him. The answer may be "nothing," or "an old coat." "Is it worn at all?" he asks. "It is not," is the reply. "What color is it?" "Gray." "A light gray?" "A very dark gray." "Are there any pockets in the coat?" "Three." "Only three?" "Three only." "Well, have you anything else?" "Nothing." "Not a single thing but the old coat?" "Not a thing." "Well, who lives in that house over there?" "The Smiths." "Do they visit you?" "Sometimes." "Both Mr. and Mrs. Smith?" "Usually." "Have they any family?" "Two children." "The house is painted white, is it not?" "Well, I should say a shade of ivory." "I suppose you are thinking I should be making my way to the next door, do you not?" "I do." "I hope I have not given you too much trouble, have I?" "Not at all." The player who gets caught during the visit must pay a forfeit and is out of the game. Of course, different questions will suggest themselves.

#### HUNTING THE SUPPER.

In this game the table is set and the guests are asked to sit down to it, though not a sign of anything to eat is visible. Then the hostess places the end of a cord in the hand of each guest, who is told to go and hunt for his supper. The cord is wound up until the other end is reached, when a dish of something edible is revealed, or it may be a card telling what they can have. It may be fruit, sandwiches, cake, candy or what not.

All the dishes are brought to the table, when the supper begins. The winding and unwinding of the twisted cord makes lots of fun.

#### GAME OF "THE BOOKBINDER."

"Bookbinder" is a holiday time diversion that looks simple and tame, but can be made highly exciting. Any number of persons sit in a circle, each holding a book on the back of his clenched fists. One who has been chosen bookbinder and stands in the middle of the circle goes to any player and, seizing that player's book, attempts to rap his knuckles, which the holder of the book tries to avoid by pulling back his hands quickly.

## GREATEST TWO WEEKS OF UTAH'S YEAR

JANUARY 24—FEBRUARY 5, 1916

Just at the time the Farmer and his Wife need a vacation.

## Farmers' Round-Up

AND

## Housekeepers' Conference

AT THE

## Utah Agricultural College

Logan, Utah

The most notable annual convention held in the Inter-Mountain States.

Progressive Farmers, Home-makers, State Scientists and Educators will be in attendance.

Progressive Farmers, Home-makers, Scientists on Utah Farming and Stock Raising which aggregate \$200,000,000 and on the various phases of Home Management.

### Special Emphasis will be placed upon:

- How to Increase Farm Profits.
- How to Improve Methods of Marketing.
- Health and Sanitation in the farm Home.

### Opportunity will be given for laboratory work in:

- Floriculture—in greenhouse.
- Poultry—in poultry plant.
- Farm Repair Work and Horseshoeing—in shops.
- Veterinary Practice—in Veterinary hospital.
- Potato and Grain Diseases—in Botany laboratory.
- Judging Agricultural Products—in Agricultural laboratories.
- Home Nursing—in Women's Building.
- Dress making and Millinery—in Women's Building.

Registration Fee, \$1.00. Day Nursery in Gymnasium.

If the bookbinder succeeds in this the player whose knuckles he raps changes places with him otherwise he replaces the book and tries to do the same with some one else. The bookbinder may pretend to seize a book without actually doing so, and if the holder pulls away his hands so that the book falls, he must take the leader's place as if his knuckles had been rapped.

The leader can make this game very exciting if he runs quickly from one

to another, pretending to take up one book and then seizing another.

#### THEORY AND PRACTICE

"Father," said Johnny, "what is the difference between farming and agriculture?"

"Well, my son, for farming you need a plow and a harrow and other implements, and for agriculture all you need is a pencil and a piece of paper."—Exchange.



## THE CARE OF A TYPHOID

## FEVER CASE.

By Miss Gertrude Tobiason.

I think typhoid fever is about the most common of diseases among people which is not attended by a trained nurse. As a rule this disease is not regarded in as serious a light as it should be until it come into the home, then the most essentials of the nursing or caring for it are not understood properly. The care of typhoid is of the utmost importance, if a good nurse is on the case it isn't so vastly important that a physician call on the patient each day, unless complications occur which need immediate attention. The greatest need in the care of this malady is strict cleanliness, to be clean, means often times, the saving of life. By this is meant both patient and attendant should be clean bodily and morally.

The precautions thus taken will not only save life, but will prevent spreading and when ten would have had it, only one has suffered.

The cleanliness consists, first of all, in using plenty of water and soap, every time the patient has been cared for the attendant should thoroughly wash her hands with soap and water,

then soak them in carbolic acid solution, (1 teaspoonful of carbolic acid to one pint of water, for two or five minutes, then rinse them in clear water.

The patient must not be permitted to cleanse himself, because he cannot properly disinfect his hands after, and this should be done before anything is handled by him. The dishes and any other article of any kind should be put into a solution of carbolic or lysol for one hour or more before it is boiled.

The boiling of dishes, bed and body linen is of the utmost importance because the germs which cause the disease are all through the stools, urine and spectune, and the patient cleansing himself or getting any of the excreta in the fingers or hands can contaminate anything which he may touch. If by any chance his hand has come in contact with the excreta he should have it washed and disinfected. In a great many homes, especially where the mother or neighbor lady or some one unaccustomed to the skilled care of this disease, has charge of the case, the patient is left to care for himself largely, because of other duties of the attendant, and little thought is given to the sick one, "It is only typhoid that he has," is often the remark made to one another.

After the kidneys have acted and the bowels have moved, the parts should be cleansed with lysol or carbolic solution, and the excreta should not be thrown down the outside toilet but emptied into a pail and a generous amount of chloride of lime or the carbolic solution poured in with it and this allowed to stand for two hours, when the contents of the pail is emptied into a hole, at least three feet deep, and ashes, lime or dirt thrown in with it. It would be a good thing if the hole is dug where the sun can shine on it during some part of the day.

The bathing of the patient is important, the body should have one cleansing bath a day and all bedding should be removed that is at all damp, the bed must be kept thoroughly dry. If the fever is high either cool sponges or cool baths are given in addition to the soap bath, unless contradicted by the physician. The mouth should be cleansed several times a day with one part glycerine, one part listerine, one part alcohol or lemon juice. The teeth should receive special attention once or twice a day. The patient must be encouraged to drink quantities of cold water, a glass full every half hour or so and by doing this the cold baths will be lessened.

The diet usually consists of milk, custards, ice cream, fruit juices and liquids of that kind, some physicians have even had their patients on solid diet during the course of the fever, but needless to say unless a doctor is where he can see his patient often, thus must never be considered for one moment, only by doctor's orders and under his direction can this be done.

Patients should not be burdened with a lot of clothing, while they are in bed it is unsanitary and the washing is hard enough without under clothing. Blankets should never be used for a patient to sleep in, they are too difficult to laundry and they keep the germs very well.

Typhoid patients should have the

bowels watched carefully as constipation accompanies the disease, and in the first stages or during the onset castor oil (1 tablespoonful to 2 tablespoonful) may be taken to good advantage, but after the first week or so no drugs or medicine should be given, but the bowels kept in good condition by the use of the enema, or injection of water into the bowels. When the patient has gas a long rubber tube may be injected into the bowels, a few inches and be released, some times hot applications to the abdomen is very good but very few people can do that right. Some times trained nurses don't do it correctly.

The temperature must be carefully watched and reported to the doctor.

The patient should sleep a great deal and a warm alcohol rub at night will often induce sleep.

The patient should receive no visitors, but when anyone comes, shaking hands with the patient is in bad taste and should not be permitted, and of course kissing the patient is not to be considered. During the convalescence the patient must be very carefully watched on account of his intense hunger and the strictest care be taken to avoid a relapse.

Small children may often watch for an opportunity to get some thing and bad cases have resulted from light ones in the beginning just because they have been permitted to eat, when they should not. Death has occurred, after the patient has been doing nicely and thru some carelessness, a relapse and some times death, so be clean, careful, content.

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Here and There On The Farm

THE FRONT OF YOUR HOUSE.

The planning of a front yard has quite as much to do with its beauty as the care it requires to maintain it and in the country where time and water are frequently a problem in the matter of a garden the simpler plants are the ones to choose. A garden which is filled to overflowing with all kinds of plants and shrubs, indiscriminately and injudiciously crowded in, is anything but pleasing to the eye. Like the rooms of a house the first requisites of a yard are comfort, simplicity and harmony and certainly in many well kept gardens we fail to find any one of them. How many times have we seen a vivid red house with a bright pink flowering vine climbing over it, a sight which is equally as hideous as the unkept house. Or how often have we seen two shades of flowers, either one exquisite by itself, so planted together as to utterly ruin one another.

For a plant that requires little care, one of the most beautiful is the plain old-fashioned geranium. They come in many exquisite shades of red and pink, but these shades should not be mixed, any one by itself being beautiful. Then there are daisies, nasturtiums, hollyhocks, cannas, and that most superb of all, roses. After the hardier varieties of roses are well started they require very little attention. Indeed I have seen some very old, large bushes growing for years in the hardest kind of soil without either water or pruning. Sweet peas, while they do need moisture, are not hard to raise and there is nothing more refreshing than a bed of them in the spring. They will bloom for weeks and reseed themselves for several years if they have any chance at all. They are one of the few kinds of brilliant flowered shrubs that are prettier mixed than in one shade. Their tints are so delicate that they rarely if ever clash with one another, and from an exquisite dash of many colors in a garden.

With the thought in mind that it is not essential to an artistic front to have an elaborate one let us proceed to the first thing to consider in the arrangement of the yard. The very first consideration is the color of the house, of course. White, with red or green roof and green blinds or casings, is absolutely without equal. Add to this a low wide veranda across the front and you have an ideal setting with which it is really difficult to clash in your flowers if you use any judgment at all. The next choice is a plain grey or tan of a light shade. The less trimming on any house the better. Dark, intense colors, mixed colors or shades, or vivid glaring shades are a positive mar on the landscape and ruin the prettiest garden. A plot of grass even though it be small is almost essential. Blue grass is the best. On a small lawn there should be no plants, beds or shrubs to interrupt the expanse as they only accentuate the fact that its small while a plain lawn assumes greater expanse. Around the outside edge a row of dark red geraniums set it off. Bright yellow nasturtiums are also good here or roses but as the geraniums are the most showy against the green

of the lawn they are always most effective. Roses should really have a corner of the garden set off for them by themselves. Climbing roses over the porch add to the beauty of the yard. Wistaria, Honeysuckle and Snail Bean are likewise ideal porch climbers. If your front yard must be small and your back yard bare, a row of white and lavender lilacs across on each side of the house will shut off the displeasing back and form an artistic background.

WEEDS

Weeds stand condemned on two big counts—they rob crops of moisture and of plant food. It was once thought that the first of these offenses was the greater, but now it is known that the second is as great as the first. Analyses of many kinds of weeds made at the North Dakota station, reported in a bulletin just published, show that a ton of green weeds may take enough phosphorous from the soil to produce from one to five bushels of wheat, and enough nitrogen to produce from two to 10 bushels of wheat. This plant food is not lost, of course, for it goes back into the soil when the weeds are plowed under, but it is kept from the crop. At the Illinois station, corn in which weeds were allowed to grow at will from the outset made only 7.1 bushels to the acre as an average for eight years. Irrigating the weedy corn, to make sure that an abundance of moisture was present all the time, resulted in an increase of only 3.8 bushels to the acre. This showed that using food was as serious an effect of the weeds as using water. Crops and weeds cannot thrive together even in a favorable season.—Nebraska Farmer.

CLEAN UP DAYS.

We have had our clean-up days in Utah during the whole year or at least a good many of the towns of the State have, what we need however, is a continual clean-up day. Keeping at it all the time. For the protection of the health of your family and the beautification of your home surroundings clean them up in good shape before the hard winter weather sets in. In the last issue of Pictorial Review they published an article about these clean-up day and the results of this great movement and reviewing the situation they ask.

But what of the permanent results? Are the towns of America really cleaner for this splendid enthusiasm? Are your streets alleys, vacant lots, and back yards cleaner today than they were a year ago? If not, then your clean-up day enthusiasm was not the right sort.

Did it make those who had disregarded the health laws live up to the spirit and letter of the ordinances? If not, then your clean-up day failed in its most important mission.

Did it instill in the hearts of your children the desire for more orderly school yards? Did it put the fear of fire and disease in the souls of the reckless and unsanitary?

Perhaps you haven't thought about clean-up day since last spring. Then take a walk around your town, through alleys, behind stores and warehouses, through vacant lots.

What America needs is not one day of concentrated enthusiasm and energy in the cause of cleanliness and sanitation, but the year-round habit of neatness and civic pride which makes for sustained cleanliness and enduring sanitation.

NEED OF A YEARLY BUSINESS INVENTORY.

The young farmer who is endeavoring to build up a more efficient and profitable business seldom retains much cash. When money is received he buys a new implement, another animal, improves a building, or makes payments on bills for things bought on credit. During the course of the year he may receive and pay out large sums of money, leaving almost no cash at the end of the year. The annual returns may seem to have been only a fair living for himself and family, whereas the farm business may have turned a good profit, which was invested from month to month. Hence it is important for the farmer's guidance and encouragement that he make an annual inventory of his farm investments. This inventory should be a detailed list, with values, of everything used in the farm business, including land, buildings, live stock, machinery and tools, produce for feed or sale, supplies, bills receivable, and cash; also a list of all accounts and bills owing. The difference between the total assets and debts shows the net farm worth.

A study of two successive inventories of a farm illustrates how one young farmer on 100 acres prospered regardless of the fact that he had almost no cash at the end of the year. The total assets at the beginning of the year amounted to \$13,090 and to \$13,400 at the end of the same year, an increase of \$310. The increased investment in live stock, machinery and tools, and more produce held for sale amounted to \$1,073, but this was partially offset by the cash decrease of \$763. The farm indebtedness was also reduced by \$253, thus making a total increase in net worth to the farm business of \$563. The inventory values covered all depreciations and increases in values, so that this \$563 was net increase in the value of the farm investment. It means that this sum was saved from the year's business after all farm expenses had been paid, including interest on borrowed money and all living expenses. The amount of cash at the end of the year, \$133, proved to be no indication of the success of the year's business.

GOSH DARN IT!  
Mace Walton.

Gosh darn it all, I'd like to know who made so many books about the earth, the birds the bugs, the weeds, the singin' brooks. I ain't no shark at sayin' things, I'm awful pore at spellin', an' when they spring them endless names, be gosh, I feel like yellin', "I never made the dad burned things; I don't know one from tother; I can't tell by a pink eyed rat jest what dog killed its mother; I don't know that the earth is round—its flat as flat kin be—so what's the use of drillin' all this moonshine into me. That poe old Granddad wuz an ape is just some bunkim stuff—of course I know you're kiddin' me, but then enough's enough!"

I don't know who the fellers wuz that made these dog-goned books that

teachers hand us out to read and store on mental hooks. I jest can't swaller half the junk they serve red hot and burnin', and so I git in some lone spot and cuss—"Gash darn the learnin'."

Do not swear if the cow kicks you when you tie up her tail. Put on something to keep off the flies or keep her tail loose.

We are in the midst of the fair season. Do not fail to avail yourself of this great opportunity to learn.



Dry Shoes In Wet Weather

By The Oil Philosopher.

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Ask your dealer for Duck-Back Shoe Oil. If he should be out of stock, telephone or write the Utah Oil Refining Company, Salt Lake City, and it will see that you are supplied.



## GREEN FEED IN WINTER.

**Poultryman Should Have a Supply to Last Through the Season, if Birds Are Kept in Good Condition.**

Green feeds for poultry contain only a small percentage of actual food nutrients, but are important because of their succulence and bulk, which lighten the grain rations and assist in keeping the birds in good condition. The poultryman should secure a sufficient supply of such feeds to last through the winter months in sections where growing green feeds can not be obtained. When chickens are fattened without the use of milk, green feed helps to keep them in good condition.

Cabbages, mangel wurzels, clover, alfalfa, and sprouted oats are the green feeds commonly used during the winter. Cabbages do not keep as well in ordinary cellars as mangel wurzels, so where both of these feeds are available the cabbages are fed first. They are often suspended, while the mangel wurzels are split and stuck on a nail on the wall of the pen. Clover and alfalfa may be fed as hay, cut into one-half to 1 inch lengths, or may be bought in the form of meal. Alfalfa meal has a feeding analysis equal to bran, but is not as digestible on account of its larger percentage of fiber. Clover and alfalfa should be cut while slightly immature, if they are to be cured and fed to poultry. The leaves and chaff from such hay are especially adapted for poultry feeding.

Sprouted oats make a very good green feed and are used quite extensively in this country. The oats can be soaked for 12 hours in warm water and then spread out in a layer of from one-half to one and one-half inches deep on a floor, or in a tray or tier of flats, which have openings or holes or a three-sixteenths (3-16) inch mesh wire bottom, so that the water drains freely. They may be stirred daily and sprinkled, or allowed to sprout without stirring, until ready for feeding. They are usually fed when the sprouts are from 1 to 1½ inches long, although some poultrymen prefer to allow the sprouts to grow to 2 or 3 inches long. Oats need a moist and warm atmosphere in which to sprout quickly, so that it is necessary to furnish heat or to keep them in a warm room during the winter, while they may be sprouted out of doors during the rest of the year. It takes from 6 to 10 days to sprout oats, depending on the temperature of the room. Oats frequently become moldy while sprouting. To prevent this, they may be treated with formalin, using 1 pint of formalin to 30 gallons of water, which is sprinkled over and thoroughly mixed with 30 bushels of oats. Cover the oats with a blanket for 24 hours; then stir until they are dry. Keep them in a sack which has also been soaked in formalin. Oats thus treated and dried may be held for a long time for sprouting.

Where the double-yard system of confining poultry is used, one of the yards is kept in green feed, into which the hens are turned when the crop attains a height of 4 or 5 inches. This method of alternately yarding poultry furnishes green feed for the birds and at the same time freshens the yard. Rape, wheat, rye, oats, and barley are usually sown for this purpose. Rye is good for late fall and early spring

feeding, as it will live through the winter in most sections. Oats, wheat, and barley are used throughout the spring, summer, and early fall. Several of these grains may be sown together to secure a greater variety of green feed, and any quick-growing grains may be used for this purpose.

**IT PAYS TO ADD "RELISHES" TO MEALS FOR FARM ANIMALS.**

By W. A. Henry and F. B. Morrison, University of Wisconsin.

Numerous scientific trials and common experience on farms have abundantly demonstrated the value of adding succulent feeds to the rations of farm animals. The beneficial effects of succulence, whether supplied as pasturage, silage, soilage, or roots, are many. Just as our own appetites are stimulated by fruits and green vegetables, succulent feeds are relishes for the animals of the farm, inducing them to consume more feed and convert it into useful products.

It is reasonable to hold that such palatable feeds stimulate digestion, and it is well known that their beneficial laxative action aids greatly in keeping the digestive tract in good condition. The flesh of root-fed animals is in general more "sappy" or watery. There is no doubt that, for breeding stock, less tense and more watery flesh, a natural sequence of feeding succulence, is more conducive to vigorous young at birth and to their hearty maintenance after birth than is the condition of hard, dry flesh produced by feeding only dry forage through the winter.

The dairy cow gives her maximum returns when she is supplied with succulence. Such feeds tends toward rapid sturdy growth with the young of all farm animals. Some succulent food is especially beneficial in keeping the horse in condition, to which the thrift of the work horse when turned out to pasture bears witness.

But the horse at hard or fast work should receive only a limited allowance of these feeds. Steers and sheep make rapid and economical gains on pasture, and grass-fed animals are in the best possible condition to make rapid gains when placed in the feed lot. Among the most important contributions of the experiment stations are their demonstrations of the economy of feeding silage to fattening cattle and sheep and of the possibilities of cheapening the cost of producing pork through the utilization of pasture.

**"HOGGING-OFF" FIELD PEAS.**

The "hogging-off" of field peas is a practical and efficient method of harvesting the crop and feeding the hogs. Farmers who have tried it very generally agree that the practice is economical and successful.

The Idaho Agricultural Experiment Station has, in a practical test, conducted during the summer of 1915, indicated that the practice of "hogging-off" peas is successful. There are some disadvantages to "hogging-off" field peas such as wet weather, difficulty of fencing, packed and hardened fields during wet weather, etc., but in spite of these disadvantages the practice is successfully followed in many sections of the state; some of the more distinct advantages are labor saved in harvesting, rapid and economical gains on the hogs, increased fertility of the land and more complete use of the land, i. e., growing a crop

of field peas instead of summer fallow.

A plot of field peas consisting of 4.25 acres was used for this experiment. The yield of peas was estimated to be 20 bushels or 1200 pounds per acre. The plot of 4.25 acres was divided into three lots, lot 1 consisting of 1.32 acres, lot 2, 1.42 acres, and lot 3, 1.51 acres respectively. Lot 1 was used for 25 days by 20 pigs averaging 78 pounds and producing 420 pounds gain; lot 2 was used for 38 days by 20 pigs averaging 84.8 pounds and producing 620 pounds gain; lot 3 was used for 30 days by 15 pigs averaging 54.7 pounds and for 44 days by 30 pigs averaging 70.8 pounds and producing 1027 pounds gain. Lot 3 not only had the run of the 1.51 acres but gleaned over lots 1 and 2 after the hogs had been removed from those lots, and the amount of gain made by lot 3, clearly shows the importance of running a second bunch of hogs on a given area to clean the peas up thoroughly. Lot 2 was fed, in addition to the peas, rolled barley at the rate of 2 pounds per 100 pounds live weight or a total of 1241 pounds of barley. The barley was valued at \$25 per ton and the value of the amount fed was deducted from the value of the peas and the supplemented barley.

Valuing pork at \$6 per hundred weight, the peas produced after deducting the value of the barley,

\$108.51 worth of pork, an average return of \$25.53 per acre or \$2.13 per 100 pound of pea in the field.

The use of the barley as a supplement at the rate of 2 pounds per 100 pounds live weight paid for the grain but results did not seem to justify the additional labor.—C. W. Hickman, Idaho Experiment Station.

**HOW CLOSE TO THE TIME OF CALVING SHOULD A COW BE MILKED.**

Answered by Dr. W. E. Carroll.

Results of some work done here indicate that for best production, cows should be allowed to go dry at least one month. More than two months, however seem to be no advantage. So along about six weeks or two months is usually considered a good time.

Very frequently cows can be milked up to the day of calving, but usually the milk assumes an unnatural condition which makes it undesirable for food.

Some men is going to the devil take up entirely too much time on the way.

A determined fool is more pleasant to contemplate than a hesitating philosopher.

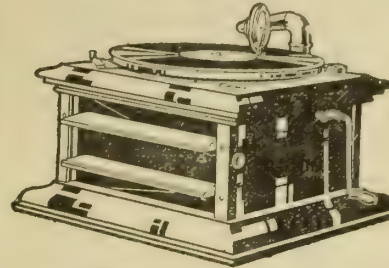
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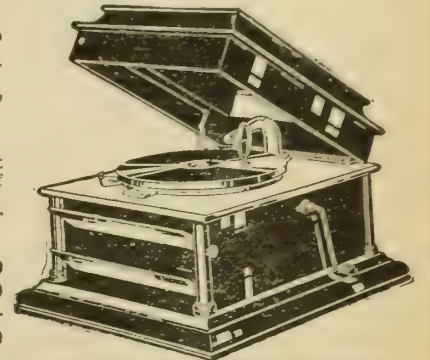
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## POULTRY

### PRODUCING THE UTAH FANCIER'S EGG.

By Edwin Brickert.

Our main object in producing a fancier's egg is to get an egg that will, under favorable conditions, hatch a good, strong chick. Whether we are producing eggs for our own incubation or to sell, we should be just as careful, if we desire to be successful in our business. It is not sufficient to say our object is merely a fertile egg, as a great many fertile eggs do not hatch. And, a great many that do hatch will not produce a chick that will live and grow to maturity.

Along with our main object, as stated above, we should desire to produce eggs of the proper size, color, shape and texture, if we want the most desirable product obtainable.

And, in producing a first-class egg, permit me to call your attention once more to uniformity. This one element must prevail if we want the best egg.

In producing the fancier's egg we follow the same plans as with the commercial egg in some instances, and in some we go in entirely the opposite direction.

As was the case with producing the commercial egg, we cannot be too particular about the place we keep our hens. In fact, their surroundings and environment play a very important part in the production of their egg.

Remember that our "fancy" hens most likely have invested in them several more dollars per head than the commercial hen; they are worth more money, and for this reason the hens should have better care than the common hen, and in most cases probably do.

As said before, they should be housed in a clean, well-lighted, well-ventilated, warm, airy house, with all accommodations to make them contented and happy. This includes plenty of the proper kind of feed, water, litter to scratch in, sufficient labor in their behalf, and, in fact, anything that the owner can think of as contributing to the happiness and welfare of his hen. He can, and the wise farmer will, study his hen to determine her peculiarities, and give her her likes and eliminate her dislikes.

While there are many excellent feeding systems, I am going to take the time here to give one of my own, which I have found to give the best results, especially in maintaining winter layers. And we all know that the winter time is when our hens need the most persuasion.

Early in the morning, for each 100 hens, 2 quarts of oats and 3 quarts of wheat are scattered in the litter at least 8 inches deep on the floor, mixed in the litter so the birds will have to scratch for it. At 10 o'clock they are fed green food, such as cut clover or alfalfa, mangels, cabbage and sprouted oats, every day something different. At 4 o'clock in summer and 3 o'clock in winter we feed a moist mash made of 200 pounds of wheat bran, 100 pounds middlings, 100 pounds corn-meal, 100 pounds gluten meal or ground oats, in summer 25 pounds linseed meal, 100 pounds of meat scraps or green cut bone, in winter 25 pounds oyster shell and grit, 10 pounds charcoal, thoroughly mixed. Before

sundown we give our last feed for the day—3 parts wheat, 2 parts oats, 1 part cracked corn, a handful to two birds; in very cold winter nights we add more corn. We have fresh water before them at all times, giving warm water on very cold days. We believe in regularity in feeding and practice it.

In selecting your breeders from which you are depending on for a season's crop of eggs, you cannot be too careful. Sometimes the most experienced breeder will here make a mistake.

First, a progressive breeder will have his hens all one variety. This is for the reason that no one will pay a very high price for mongrel eggs, neither are they worth much to their producer.

Next, it is not best to raise eggs for incubation from hens under 1 year old. While some pullet eggs hatch very well, and the chicks may grow and thrive, yet it is not advisable to ship eggs from pullets, especially from Mediterranean breeds, if a breeder desires all satisfied customers and no trouble.

We want yearling hens, with a trapped record, as a pullet of not less than 120 to 160 (this depends on the breed) and as much over as possible.

They must be perfectly healthy, of normal size, shape, color and character, a hen as near her standard as possible, and a hen that we think will have a prosperous laying season.

Another important factor not to be overlooked is our male bird. We are not particular as to his age, only he must not be too old to be active. Some people like to mate a cockerel to yearling hens, while others want a cock two or three years old. I will usually advise the former method. However, the advantage of the tried cock bird is that a person knows what to look for. If he has been a good breeder, he probably will be again, while a cockerel is a guess. Sometimes we guess good and sometimes bad.

Our male birds must be energetic and active and capable of fertilizing a sufficient number of hens. To insure the highest state of fertility, do not give your male too many hens. For Mediterraneans, twenty hens to the male is not too many when they are allowed range, while ten to twelve is enough when confined, and eight is safer and more sure. When confined, I never allow my Asiatic male birds more than four females and my Americans six to eight. Some people call me a fanatic on this line, but my eggs are fertile, nevertheless.

Now in these advanced times, when a breeder guarantees every egg in a setting he sells, he should be particular and careful enough to see that every egg is fertile, or, in fact, give every egg his attention.

As soon as the hens have returned from their show circuit, which is about the middle of February, they should be placed in their breeding pen with their male bird and be allowed to begin their season's work. It is understood that during the hen's show season, or if not show season, her vacation, that she has not had access to roosters. By this method we are absolutely sure as to the sire of her chicks.

(Continued on page 15)

## The Perfection of Union Pacific System Service



Is not a chance—it is the result of the expenditure of millions of dollars in money and the working-out of a positive plan of betterments, which have extended over a period of many years—

As a consequence, the Union Pacific System has been brought to a state of operating regularity—the effects of which are felt through every channel of the service; the work goes on from day to day, and the public is assured of the full benefits resulting therefrom—

When you buy transportation, you buy it with the same economic conservatism you would use in purchasing government bonds or other dependable securities—

In traveling, you are entitled to stability—service, and protection, for every dollar you expend—

The Union Pacific System has been termed, "The Standard Road of the West;" it is "standard" in everything the world implies.

Six trains east daily; two trains north and northwest.

CITY TICKET OFFICE, HOTEL UTAH, SALT LAKE CITY, UTAH.

## CALIFORNIA

WHERE IT'S SUMMER ALL WINTER

San Diego  
Exposition  
Open  
Until  
December 31st.

SPEND THE WINTER  
WHERE YOU WILL  
ENJOY REST  
AND PLEASANT  
WEATHER AMID  
ORANGE GROVES  
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ALL FAMOUS  
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Excursion Tickets On Sale Daily. Six Months Limit.  
For information, Tickets, California Booklets,

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# THE FARMERS' MARKET PLACE

For the Buyer

This market place offers our subscribers and readers a very good place to advertise. If you have something to sell or want to buy here is the place to tell it. These advertisements are read because they offer bargains, your bargain should be here. Take advantage of this opportunity today.

For the Seller

## THE GEM HERD.

### Improved Chester White Swine

The Home of the Western Prize Herd  
My winnings at Idaho State Fair 1913, were 13 first, 3 seconds, champion boar and sow, and champion fat barrow and a Tri-County fair held at Jerome, Ida., took all but one second. I have anything wanted in Chesters from a weanling pig to a champion boar or sow at prices all can afford. High class stock. Write me.  
For Reference—all old customers.

**GEO. H. LAWSHE.**

Falls City, Idaho

## FOR SALE

Foundation Stock in Holstein Friesian's and Duroc Jerseys. Will exchange a few for hay or grain. For breeding and particulars write  
**JOHN W. STUBBS**  
D. No. 2. Provo, Utah.

## Percheron Stallion

An unusual opportunity to purchase a good stallion. Foaled June 1913. Utah bred. Sire imported from France. Very large and finely developed. Direct all inquiries to B. T., Utah Farmer, Lehi, Utah.

## FOR SALE

The best hog and dairy farm in Utah containing eighty acres. Also a few very choice duroc boars ready for service.

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## BUTTER WRAPPERS

We carry a large stock of the Best Vegetable Parchment Butter Wrappers and Especially Prepared Ink for Printing the same. We furnish them Postage prepaid at the following Prices, money to accompany order.

100	\$ .30
200	\$1.35
500	\$3.00
1000	\$2.75

Send all orders to

**THE UTAH FARMER**  
LEHI, UTAH

## BOARS!

FOR SALE  
**BIG DUROC—JERSEYS**  
Write your wants to  
**PULLUM FARM**

Trenton Utah

## FOR SALE.

One year old Duroc Jersey boar, Defender—choice, good stock \$18.00 f. o. b. Payson, if taken at once.

**W. G. ROYLANCE**

Payson Utah

IF YOU WANT  
A BARGAIN  
"SEE ME."

160-acre improved ranch in Idaho, house, stable, fencing, water right; a big snap at \$2250; half cash.

640 acres good land in Rich county, 300 shares water; part in hay. Ranch land near, with water selling at over \$40 per acre. This would make a first class hay, grain and stock proposition. A snap at \$15 per acre; \$1750 cash, bal. easy; or might take equity in Salt Lake property at right price.

320 acres, finest place in Sanpete valley, strictly modern 9-room brick residence, 2 small houses, large barn, extra fine springs, independent electric light plant and water right; lot fine grain and hay land horses, registered cattle, hogs, implements and crop goes with place. One mile to first class town on R. R., sure some bargain at \$25,000. Terms.

860 acres improved stock ranch in Wyoming, lot of cattle, horses, over 200 hogs, all implements and crop goes with place; independent water right, fine free range; big bargain at \$35,000. Terms, or take first class city property at cash price.

"SEE"

**GEO. W. DANLEY**  
NOW.

Was. 2929. 707 Walker Bank Bldg.

## Money to Loan

On improved farms with primary water rights, at reasonable rates."

**INTER-MOUNTAIN LIFE**  
**INSURANCE CO.**

11th Floor Boston, Bldg.  
Salt Lake City, Utah.

## FRUIT AND GARDEN FARM.

8 acres—part of the old Central Experimental Farm. Only ¼ mile from Lehi, Sego Lily School and Lehi 4th ward meeting house. A farm on edge of Lehi City Limits. 360 apple trees. Prunes, currants, and gooseberry trees.

CASH OR TERMS.

**A. F. GAISFORD**

Lehi

Utah

## RICHARDS' DUROC JERSEYS

WON AT UTAH STATE FAIR, 1915—Grand Champion Boar, Grand Champion Sow, Senior Champion Boar, Senior Champion Sow Eight First Prizes, Five Second Prizes, and Five Third Prizes.

**RICHARDS DEFENDER**, Grand Champion Boar was pronounced by many cavable judges to be the best Duroc Boar ever brought west. He is 17 months old weighs over 500 pounds. The big type with quality. That's why he has so many admirers.

We purchased Junior Champion Sow and first and second prize under six months sows, so that we now have in our herd practically every first prize winner at the 1915 show.

We can make immediate deliveries of young stock, either sex, from this champion herd at reasonable prices.

Express rates on stock purchased from us is a small item as our ranch is only 135 miles north of Salt Lake City.

## RICHARDS' LIVE STOCK COMPANY

VIRGINIA

**JESSE S. RICHARDS**, Manager:

IDAHO

A beautifully white self-bleaching hard water soap, odorless and will not chap the most delicate hands. I am a hotel man, and it was necessary to find a soap that would bleach, and do perfect work, and not ruin the linen I tried many kinds of soap, but they were not satisfactory, so I began to experiment and after a number of years, I found the secret. It costs a fraction compared with the common soaps. I can make 50 pounds of bar soap for 40 cents. It positively does all I say and is easily made; just follow directions. I will mail this formula to any address on receipt of 25 cents in coin. **E. C. Baxter, P. O. Box 421, Idaho Falls, Idaho.**

## FOR SALE

### MARQUIS SEED WHEAT

I have a limited amount of excellent thoroughly fanned Marquis Seed Wheat, which I will sell at \$1.50 per bushel for immediate acceptance and in lots of not less than five bushels, **F. O. B. Gunnison**. It took first prize at County Fair. It is an early maturing, hard, red Spring wheat and heavy yielder.

**R. MICHELSEN**

467 South 13th East Street  
Salt Lake City.

Farm buildings folder free. Shows designs of houses, barns, granaries, etc., at our big, money-saving prices. **Western Lumber & Millwork Company, Tacoma, Washington.**

## The Grand Theatre

SUNDAY NIGHT ONLY

### VAUDEVILLE SHOW

ALL FEATURE ACTS

THE BIGGEST VALUE IN  
SALT LAKE CITY FOR  
10 AND 20 CENTS.

121 East 2nd South  
SALT LAKE CITY, UTAH.

"The man who deals in sunshine, is the one who gets the crowds; He transacts a lot more business than the one who peddles clouds. And the salesman who's a frowner will be beaten by a mile

If the man at the next counter meets his patrons with a smile."  
—Implement and Vehicle Record.

## PRODUCING THE UTAH FANCIERS' EGG.

(Continued from page 14)

From two to four weeks should be allowed the hen to "get ready" before any eggs are saved. We should not save the first few straggling eggs that come, as they probably are not fertile. The writer has found out by experience that, in most cases, when these first eggs do hatch, that the chicks are not desirable specimens.

Along in the early part of March we can begin to save our eggs. All care should be taken of them from the time they are laid until sold or placed in the incubator. The eggs should be gathered often enough during the day to prevent chilling. Never carry them loose in a basket, as they are liable to roll against each other and jar or crack so as to prevent them from hatching. If the least particle of air gets into an egg it is ruined. Carry the eggs in a basket or box with individual partitions, as this will prevent the calamity above mentioned.

It is a good plan to mark on the egg at the time of gathering, the date it is laid (for example, "2-14-16"). By this you always know the age of your egg and will not set or sell one that is too old.

If the hen is being trapnested and a record kept of her production, this should be marked on the egg at the time of gathering.

At this time your eggs should be graded. By this we mean all inferior eggs of any nature removed. Unusually large or unusually small eggs, eggs of an odd shape, an off color, with irregular shell or any egg that is not perfectly normal in every respect, will not be likely to hatch, and should be neither set nor sold.

The eggs should be placed in a receptacle free from sun or draft and where no dirt can accumulate on them.

Some people turn their eggs every day. This is a very good plan if they are to be kept any length of time before use.

Upon having a quantity of eggs shipped to you for incubation, always let them set in a dish or box or something of that nature, at least 24 hours before placing under hen or in incubator.



## STATE COLONIZATION

## ABSENTEE LANDLORDISM.

As a remedy for absentee landlordism and increasing tenancy, Mr. Weinstock urged before the market and Rural Credits Conference that the state purchase the raw land at the prevailing price, drain it or water it as conditions may require, and resell the land to actual farmers at prices not in excess of the actual cost. Referring to the successes of the Irish land act passed by the English parliament and the Australian land act, some adaptation of these acts to meet American conditions would serve to encourage land ownership and to give the man who tills the soil possession of it. He said in part:

"My plea, therefore, is for state colonization to be adopted by all states where the political system is as purely democratic as it is today in the state of California. I believe that adoption of a state colonization system will enable homeseekers to become successful farmers. I believe that a state colonization system will bring about a marked change in the existing contrasting situation between say California and Australia, which at present reads about eighty-five per cent of colonization successes in Australia and over ninety per cent failures in California colonization.

"I believe that a state colonization system will prove the only effective cure for the growing evil in our country of absentee landlordism and farm tenancy, because it will enable the more thrifty and industrious farm tenants who can save a few hundred dollars to become converted, as they have become converted in other lands,

into landed proprietors, with all the blessings that such landed proprietorship means to them and to the nation.

"I believe that a state colonization plan means also converting the farm laborer, who may have saved up a few hundred dollars, likewise into a landed proprietor, under conditions that will insure his success. Today the amount of money needed successfully to finance a modest farm is such that it would take on the part of the average farm laborer the efforts of almost a lifetime before he could accumulate a sufficient sum with which to engage in such an undertaking, whereas, under state colonization, if he has enough to make a five per cent payment on the purchase price of his land and one-third of the cost of his improvements, he would get an immediate footing, under conditions that would carry with it hope and ambition, instead of fear and dread and anxiety, in the matter of meeting his obligations.

"It would, therefore, seem that all who keenly realize the serious menace hanging over this nation in the form of steadily increasing farm tenancy, with all its consequent ills to the individual and to the nation, should enlist in the cause of advocating state colonization and should devote themselves to the patriotic service of bringing about within their own states such a political condition and such strong public sentiment as will speedily lead to transplanting the Australian state colonization methods upon our own soil."

Now is the time to renew your subscription to the Utah Farmer.

## THE DOG AS A CARRIER OF DISEASE TO STOCK.

The dog in the country is a useful and pleasant adjunct to the farm if he is properly controlled and cared for, but when neglected, may readily become a carrier of disease to stock, in addition to gaining opportunity to kill sheep and destroy gardens and other property. Dog ordinances, as a general rule, have been intended chiefly to curb the dog's power of doing harm by attacking, biting, killing or running sheep or stock. The part that he plays as a carrier of diseases to animals only recently has been recognized, when this is better understood, rural ordinances and laws which lessen this danger will gain the support of the community.

A bulletin has just been issued by the United States Department of Agriculture, "The Dog as a Carrier of Parasites and Disease." It describes a number of disease such as "foot and mouth" hog cholera" and other that can be carried by dogs. Any one interested should send for a copy.

Of the external parasites which

dogs may carry to animals. Fleas and the various kinds of ticks are both troublesome and dangerous. The remedy is clear. The owner must keep his dog clean, not merely for the comfort and happiness of the dog, but to prevent it from becoming a carrier of disagreeable and dangerous vermin.

These reasonable measures, important to the stock on the farm, have a direct connection with the health of the family. Where ringworm or other skin diseases break out among the children, or the worm parasites develop, it is well to determine whether a dirty or uncared for dog may not be carrying infection on his skin or hair, or be conveying disease from carrying directly to the food and persons of his friends. Even if no one is infected with disease, the folly of allowing a dog to remain dirty and have the freedom of a homestead, where personal cleanliness and hygiene are respected, is apparent.

A mule doesn't go forward when he is kicking—neither do you.—E. change.

## Ask Me About Salt Lake County

I am representative for the Inter-Mountain Rural Credit Association for Salt Lake County. Will gladly call on you to explain any details. Write or telephone me and I will come and see you.

P. T. MOYES.

465 South 3rd East, Salt Lake City, Utah. Phone Was. 7370-W

# Do You Want Some Six Percent Money

## On 5 to 35 years time, with no worry of foreclosure

### HOW WE WILL BE ABLE TO LOAN 6 PERCENT MONEY

Each share of stock is sold for \$100.00. Of this amount \$50 is placed in the Surplus, or Working Fund, and \$50 in the Capital Stock, or Guarantee Fund.

The Surplus is loaned to the members at 6 per cent interest per annum on first mortgages.

These mortgages are not sold, but they are placed in trust and bonds equal to their face value, bearing 5 per cent interest and secured by them, are issued and sold.

The money received from the sale of the bonds is then loaned at 6 per cent interest on first mortgages, which are also placed in trust, and bonds of equal value, bearing 5 per cent interest, are issued and sold.

This process is repeated until the Association has outstanding bonds equal to fifteen times the amount of its Capital and Surplus.

In addition to having the bonds secured by an equal amount in mortgages, the Guarantee Fund is pledged as further security for the bonds of the Association.

The bonds of the Association, thus secured, will be one of the highest class bonds issued in the United States, and will enable the Association to secure money for its members at the lowest possible rate.

### SEVEN AND THREE-TENTHS PERCENT

a year will pay a loan from us, both interest and principal in 35 years, without commissions, renewal charges, or other expense, and you may pay off your entire loan any time after five years.

Under the present conditions you are paying 9 per cent, or \$90 a year for interest alone, and at the end of the period for which it was loaned you still owe the principal of \$1000. Under our plan \$73 a year will pay off a loan from us of \$1000, both interest and principal at the end of the time.

This is a Co-operative Association, therefore, you must necessarily become a shareholder in order to enjoy the advantages it has to offer. Clip out, fill in and mail the coupon today. The sooner you join the Association, the sooner you will get your loan.

#### THE INTER-MOUNTAIN RURAL CREDIT ASSOCIATION SALT LAKE CITY, UTAH.

Without obligating me in any way please send me your sixteen-page booklet which explains in detail the plan of The Inter-Mountain Rural Credit Association and tells how I can become a member and enjoy the benefits of this co-operative organization of Utah and Idaho.

Name.....

Address.....

**The Inter-Mountain Rural Credit Association**  
606 MCINTYRE BUILDING. SALT LAKE CITY, UTAH.



# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region

OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE

VOLUME XII; No. 22

LEHI AND SALT LAKE CITY, UTAH

JANUARY 1, 1916





# What Are You Thinking About?

Go with me for just a moment behind the scenes, onto the stage, and see the closing act of 1915.—the time is past and the year ended.

What about 1916, you ask, well thats what we have been thinking about.

Do you know that one is influenced by what he hears, and sees and reads. For this reason we have been very careful as to the material that appeared in our paper, both the articles and the advertisements.

What are you think about in regards to your work for next year. Do you want something that will help you, inspire and encourage you, in your work? Well! thats what we have planned to do during 1916.

We have been planning and thinking for some time how to best serve our subscribers during the year. We have outlined a program that is by far the best we have yet undertaken.

We have secured some of the best men in this western country to help carry out our work. To help solve some of your problems for we believe we know what they are.

Farming in Utah is quite different to that of other states. We have our own troubles. It is our idea to present in the columns of the Utah Farmer the results of study, research, experiments and practical farmers for the help and benefit of all.

All of us know that for any paper to be successful we need subscribers. To carry out our plans we need your help. Renew your own subscription and ask some neighbor or friend to subscribe.

Right now at the beginning of the year is the time to do it. Answer the letter we have sent you and enclose your neighbors subscription with yours. It costs only the small amount of one dollar for a year—fifty two copies.

The Utah Farmer will be the biggest dollar's worth you can get for 1916. You have noticed the improvements we have been making lately—well! we will make more of them. Encourage us in our work by sending your reply today to the Utah Farmer at Lehi, Utah.



# What Place Should Fruit Growing Have On a Well Balanced Farm In Utah?

By E. D. Ball.

There is need of optimism in the fruit growing business at the present time. There is also reason for optimism. There has probably always been reason for optimism, but there was a time when we had, if anything too much, especially in certain quarters. Of recent years we have had nothing but pessimism. We have had in fact, pessimistic pessimism of an even more superlative degree than the previous optimism. The culmination of this, to the writer's mind, was a statement made at a recent State Fair by a prominent politician, that we should not exhibit apples at the Fair, because, as the speaker asserted, no one had ever made any money in fruit growing.

That statement is as absurd on one hand as some of the glittering prospectuses of the promoter of a few years past were, one the other. The fact is that there are fruit growers whose chief worry is how to dodge an income tax and there always will be.

There are also fruit growers who are today worrying about where to obtain the means to pay their land tax and still have enough to struggle through the winter—and there no doubt always will be.

There are fruit growers that prune their trees until you could see a black bird anywhere in the orchard, and then kick because the few stray branches left cannot support a paying crop—and I suppose there always will be.

There are also fruit growers who give the pruning shears a wave or two in the direction of the orchard in the spring and then in the fall deliver carloads of miserable, undersized, runty Ben Davis that knock the bottom out of the markets and keep them out until late in the spring. Nature slips a clog occasionally and turns out such men and I suppose always will.

The fact is, that fruit growing is a business, is a highly specialized business and like any other business to succeed must be built up slowly and carefully on a foundation of experience.

Sugar beet growing has been one of the most successful and profitable of recent agricultural introductions to this State. It has brought prosperity and added wealth to every community that has undertaken it, and yet if a beet grower in the spring of the year should figure on a return of 300 of 400 dollars per acre for his beets, it would no doubt be the

easiest thing in the world for him to spend a little more here and a little more there, on their production, until when harvested in the fall his eighty or one hundred dollar crop would all go for expenses and leave him nothing for his labor.

Poultry raising is very much like fruit growing in one respect at least. It is possible to sit down and figure out on paper the most wonderful profits in poultry raising: The hen will produce three dollars worth of eggs a year, and it costs fifty cents to raise her and one dollar to feed her, making one and one-half dollars profit per hen, one thousand hens-fifteen hundred dollars profit, two thousand hens three thousand dollars profit, and so on. It sounds easy and is easy, one of the easiest ways, in fact, to make a total failure for a man who starts in with enthusiasm plus, and experience minus, of which the writer knows. And yet many a poultry raiser starting with a little old box over a single setting hen has

worked up and expanded until today they are actually realizing a dollar profit per hen on large flocks.

In the writer's opinion, the lesson of the beet grower and the poultry man are the lessons for the fruit grower. Big profits on paper and big expenses also on paper, but of the promise-to-pay kind, have been the ruin of many a "would be" fruit grower, as well as many a "would be" poultry raiser or business man, while conservative estimates of profit, founded on experience, followed by conservative expenses as a result of the same experience, have made many a beet farmer prosperous, and many an orchard man wealthy.

Before we come to the subject of this paper—for we really expect to come to the subject after a while—let us examine the condition of fruit growing in another region different from ours in many ways but from which we can draw many valuable conclusions.

Professor Lewis of the Oregon

Experiment Station in connection with Mr. Vickers has just published a rather remarkably valuable bulletin for the apple grower. These professors have for a number of years been making a study of the cost of production of apples in the Pacific Northwest: Oregon, Washington and British Columbia. They have obtained the cost of planting and developing orchards and producing apples on a thousand different orchards in this section and have tabulated them, summarized them and given the results in Bulletin No. 132 of the Oregon Experiment Station.

This is by far the broadest, most complete and comprehensive survey that has ever been made of fruit growing conditions in the West, and these results have appeared to me to be so valuable that I am presenting for your consideration the summaries in a series of charts. Those of you who know the writer of old, know that it would be impossible for him to present a subject without charts and that the more and bigger the charts, the happier he is. Joking aside, however, these results are worthy of the serious study of every apple grower in the State, and as they more nearly apply to method of the peach grower than the apple grower in this section, even the peach growers (Dr. Stoddard especially) should listen with tolerance.

In studying the costs, Professor Lewis and his associates divided the orchards studied into the following groups.

Group I—orchards under ten acres.

Group II—orchards from 11 to 25 acres.

Group III—orchards from 25 to 50 acres.

Group IV—bonanza orchards 500 acres and over.

In the actual working out, the orchards of group I averaged over seven acres; in group II, seventeen acres; in group III, twenty-eight acres, indicating that ten acres is nearly the minimum and twenty-five acres nearly the maximum orchard in this district until you get to the orchards of group IV. The latter averaged over 500 acres and are the promotion propositions that infest the country. These bonanza orchards are nearly all young and so little or no returns have been received to date and in the writer's opinion no returns will ever be received on most

TABLE NO. 1 INVESTMENT (PER ACRE).					
Age of Orchards.	Group I Avg. acres (7)	II (17)	III (29)	Average.	
2—5	4	447	682	504	550
6—9	8	977	886	525	800
10—18	13	1304	796	729	950
Averages	909	788	586		775

TABLE NO. 2. OVERHEAD COSTS (PER ACRE).					
	Group I Average acres (7)	II (17)	III (29)	Average.	
2—5 yrs.					
Tax and Insurance	1.54	2.21	1.50	1.80	
Interest on Invest.	26.80	40.90	30.25	32.60	
Deprec. on Equip.	4.59	3.38	2.59	3.50	
Totals	32.93	46.50	34.34	38.00	
6—9 yrs.					
Tax and Insurance	5.66	8.03	4.88	6.20	
Interest on Invest.	58.60	53.14	31.48	47.75	
Deprec. on Equip.	6.83	3.80	2.49	4.40	
Totals	71.09	64.97	38.85	58.00	
10—18 yrs.					
Tax and Insurance	7.26	6.77	5.18	6.40	
Interest on Invest.	78.25	47.74	43.73	56.50	
Deprec. on Equip.	9.83	4.81	3.40	6.00	
Totals	95.34	59.32	52.31	69.00	

TABLE NO. 7. TOTAL AVERAGE COSTS (PER BOX).						
Age	Overhead	Growing	Total	No. Box	Handling	Total
6—9 yrs.	.435	.27	.705	134	47	1.18
10—18 yrs.	.30	.18	.48	233	47	.95

(Continued on page 6)



## LIVE STOCK

### FEEDING HOGS.

By I. D. O'Donnell.

Due to the high prices that have been prevailing for grains of all kinds during the past year and to the relatively low prices to be had for fat hogs during the same period, many of our farmers have dropped for the time being the business of growing and fattening hogs.

It is a well-established principle that the man who goes into the stock business strong when he thinks the conditions are just right and who goes out when he thinks the conditions are not just right seldom, if ever, prospers in the stock business. The men who prosper through live stock are those who consistently year after year handle sufficient live stock to consume the products of their fields. There is no merit in the plan of going into and out of stock work in an effort to outguess market conditions. A disadvantage of this plan is that any break in the handling of stock is a serious setback in the up-building of the farm droves and herds, and it fails to bring returns for the money invested in buildings and equipment year after year. Another condition is that the farmer is rarely able to "guess" when he should go into and out of the business, and the result is he is usually out when he should be in. If you are going to handle live stock, make a permanent and continuous business. Use good judgment in what you feed and when you feed it, but keep everlastingly with live stock and you will profit.

Farmers who have plenty of alfalfa, and it is an accepted fact that with alfalfa pasture as a basis for hog feeding and with the addition of small grain or corn in amount to suit the particular period of the feeding you have feed that will produce good pork as cheaply as it may be produced.

While it is not desired to go into the details of experiments in feeding hogs on alfalfa pasture, it may be stated here that numerous tests have been made under all ordinary conditions, and the returns to be had from alfalfa pasture through pork range from \$20 to above \$80 per acre after full allowance at market price has been made for all grain fed. This is a good return

when it is considered that the hogs do the work.

Following up these experiments tests are now being made in running hogs on alfalfa pasture and requiring them to harvest in addition their own small grain or corn. The present status of these experiments tends to show that the hog has no objection to acting as a grain harvester or corn husker, and the farmer will save what he has heretofore spent in shucking corn and thrashing grain for hogs.

Year after year hogs have heretofore returned profit to the farmers under conditions not nearly so favorable as our farmers may now take advantage of. There is no reason why our farmers should let up in hog raising or feeding. The returns and profits will be in accordance with the skill and knowledge applied, and the profits should be such as to encourage them to stay in a work which they are as well, or better, situated to handle as the average farmer of this country.

### AVERAGE SIZED SOWS BEST IN PRODUCTION OF MARKET HOGS

W. J. Carmichael.

"Some day when you can take the time, get the gifts together, decide how many you will want for the breeding herd and sort them out, taking great care to get only those which have good quality, plenty of stretch, long, strong back, good feet that stand up well on the toes with the toes together and with as much uniformity as possible. In making these selections don't lose sight of the pigs from those sows which are regularly good producers, and on the other hand, do not forget to discard the pigs of sows or strains which have shown themselves to be unprofitable. Of course succeeding generations do not always perform in a manner identical, or even similar to the preceding, but as a general rule there is a tendency towards a resemblance of record performances.

Another place where many make a mistake in the selection of breeding stock is in choosing those animals which possess the most size, regardless of quality or conformation. It is frequently the case that the larger ones are the most profitable, but year in and year out they are not as profitable in the production of market hogs as are the average-size sows. The average-size sows may not farrow quite as many pigs per litter as those above the average in weight, but they will save a larger per cent of pigs farrowed, and the offspring will almost invariably be more uniform. Take, for instance, in the herds where they are raising annually about 1,500 pigs, it is the general experience that the extreme sized sows are the most unprofitable and more expensive to handle on account of the greater amount of feed consumed and the extra labor and space required to care for them. The other extreme, that is, the small, midget female, is also to be avoided because she will likely produce a very small litter and the pigs must be kept a long time before they are heavy enough to market to a good advantage."

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Quarantine every hog, dead from cholera.

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Keep gunny sacks saturated with crude oil where hogs can rub against them. Raise more hogs and fewer lice.

It is astonishing how men lack this power of "holding on" until they reach the goal. They can make a sudden dash, but they lack grit. They are easily discouraged. They get on as long as everything goes smoothly, but when there is friction they lose heart. They depend on stronger personalities for their spirit and strength. They lack independence and originality. They dare only do what others do. They do not step boldly from the

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crowd and act fearlessly.—Theodore Cuyler.

The gods will be satisfied with the best you can do, but the neighbors will criticise you just as severely as ever.—Old Saying.



RAW PORK DANGEROUS.

Disease May Be Contracted by Eating the Flesh of Hogs, in Any Form, Not Thoroughly Cooked.

There is always the possibility that illness may follow the eating of pork that is raw or not thoroughly cooked. The danger is greatest at this season of the year when many people prepare for home consumption various food products that are customarily eaten without cooking. More of these homemade products are prepared at hog-killing time on the farm than at any other time.

American people as a rule prefer cooked pork, but there are many who, perhaps unknowingly, consume pork in an uncooked condition, either in the form of raw ham or uncooked sausages. In many localities considerable amounts of these products are made up and consumed at home, or distributed throughout the neighborhood. Large quantities of pork products intended to be eaten raw are also prepared commercially.

Why Raw Pork Causes Illness.

The disease known as trichinosis, which may result from eating raw pork, is caused by certain round-worms, called trichinae. These are microscopic in size and infest the flesh of hogs. The prevalence of trichinae in hogs is indicated by the fact that during nine years, 1898-1906, when the carcasses of hogs were inspected microscopically by Federal inspectors, of 8,000,000 carcasses so inspected, 1.41 per cent contained living trichinae and 1.16 per cent contained trichina-like bodies or disintegrating trichinae. In other words and in round numbers, trichinae were present in 1 out of 71 hogs, and if the presence of dead trichinae and trichinae-like bodies is included, in 1 out of every 39 hogs.

Unlike many other infectious diseases, the severity of an attack of trichinosis depends upon the number of parasites swallowed. Large quantities of slightly infested pork must be eaten in order to produce appreciable effects. If severe illness follows the eating of a small amount of the meat, the pork must have been heavily infested.

Sources of Infection.

In about 1,200 American cases of trichinosis, the most frequent sources of infection reported were raw sausage, 225 cases; raw ham, 213; raw pork (kind of product not specified), 185. The most serious outbreak of trichinosis in the United States in the number of persons affected was that of November and December, 1911, in California, in which 58 cases, with 1 death, resulted from summer sausage made by a farmer and peddled by him in the neighborhood.

Another outbreak occurred in Wisconsin about a year ago in which 21 cases, resulting in 3 deaths, developed in 5 families. Early in December a hog which had been on the farm of the first family for three years was slaughtered and part of the meat made into sausage. The next day some of the sausage was fried slightly and eaten. Two of the members of this family died. There were eight cases in three other families which procured some of the sausage immediately after it was prepared and ate it raw or imperfectly cooked.

How to Avoid Trichinosis.

To avoid trichinosis, no form of

pork in the raw state, including dried or smoked sausages and hams, should be eaten. All pork used as food should be cooked thoroughly. If this is done the value or wholesomeness of the meat for food purposes is not impaired by the fact that the parasites were present in it.

According to specialists of the Department, trichinae die when subjected to a temperature of about 140 degrees F. All products containing pork which are prepared to be sold as cooked products in establishments operating under Federal meat inspection are required to be cooked sufficiently to insure a temperature high enough to destroy trichinae throughout all portions of the meat. Likewise, in order to protect consumers who are careless or ignorant of the danger of raw pork products of kinds prepared customarily to be eaten without cooking, such as certain kinds of hams, and summer sausage, must be manufactured in accordance with methods which, it has been determined, destroy the vitality of any trichinae which may be present in the pork. It has been found by investigations in the Bureau of Animal Industry that if pork is subjected to a temperature not higher than 5 degrees F. for 20 days, the vitality of all trichinae is destroyed. This is one method of safeguarding pork products that are to be eaten without cooking. Other methods followed in establishments operating under Federal meat inspection consist in curing and drying the products according to certain rules which the manufacturers are required to follow.

Although products that are specially prepared for eating uncooked and bear the mark of Federal inspection may be used with safety, the custom of eating raw pork is not to be encouraged. In any case it should be remembered that fresh pork, or ordinary cured pork products are not safe as food unless properly cooked. It can not be determined with certainty by inspection whether pork is free from trichinae, and the Federal meat inspection mark does not guarantee the fitness of pork for food if it is eaten raw.

A practical rule for cooking pork is to cook it until it has lost its red color throughout all portions, or if a trace of this color is still present, at least until the fluids of the meat have become more or less jellied.

WATCH YOUR PIGS.


"Much sickness among pigs" says Dr. Fredrick, head of the Veterinary Department of the Utah Agricultural College, who travels much throughout the State, "could be avoided by proper methods of handling."

People allow their pigs to run together and burrow into hay and straw stacks. At night all that possibly can crowd into these holes to sleep where they lie on each other till morning. Here the pigs become hot and sweaty and come out into the cold morning air all steaming and overheated. They chill immediately and often contract influenza and pneumonia which results in serious losses to the owner.

This could be avoided by separating the pigs into small numbers and fencing so they can't burrow under stacks and crawl in where they become too warm.

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## CANDIED CRANBERRIES.

Candied cranberries make a delicious and inexpensive holiday confection, much resembling candied cherries but having a distinct flavor of its own. This is a suggestion to housewives from the home economics experts of the U. S. Department of Agriculture, who have been developing new uses for the cranberry. They have developed a method which if followed closely gives a bright, firm, plump, semitransparent candied fruit which can be eaten as a sweetmeat or used to give a touch of color to frosted Christmas cakes, whipped cream, or custards, or which can be used like citron in cakes or puddings or chopped up and added to "tutti-frutti" ice creams.

The secret of candying cranberries lies in handling the fruit so that it will become saturated with sugar. This calls for slow cooking on the installment plan and the use of a dish large enough to permit all the berries to float at the top of the sirup during cooking. The skins are so tough that they must be pierced before cooking to let the sirup into the pulp or interior. To do this, three little slits, each 1/8 inch long, should be made in each berry with the point of a pen-knife. Use selected large, firm cranberries. The directions for cooking are as follows:

For 1 1/2 cups of berries make a thin sirup by boiling together until clear 2 cups of sugar and 2 1/2 cups of water. When the sirup is cool, add the berries and bring very slowly to the boiling point. If the berries are heated too quickly, the skins will burst before the sirup soaks into the pulp. As soon as the sirup boils, take the dish off the stove and let it stand overnight. Next day, drain the sirup from the berries and boil it until it is reduced to about half its original volume. Put the berries into this medium-thick sirup and heat slowly; boil gently for 3 or 4 minutes, and then allow to stand for 2 hours or more. Then boil gently a third time for 5 minutes. A smaller dish probably will be needed for the third and last boiling. When thoroughly cold, or better still, on the following day, drain off the sirup and spread the berries out on a lightly buttered plate or a sheet of clean, waxed or lightly buttered paper until the surface of the berries dries.


The berries if directions have been followed, will candy separately, and not into a sticky mass.

To make a delicious ice cream, add 1/2 to 3/4 of a cup of chopped berries to each quart of the cream mixture. They also can be combined with bits of candied orange or lemon peel, or other glace fruits to make "tutti-frutti" ice cream. The sirup left over after the berries are candied has a pleasant sweet-acid flavor and fine color and is excellent in pudding sauce or even, when diluted with water, for use on pancakes, waffles, etc.

### AGENTS!

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Mary had a little limb,  
So little that she grieved.  
And when the style for slit skirts passed.  
Poor Mary felt relieved.



WHAT PLACE SHOULD FRUIT  
GROWING HAVE ON A WELL  
BALANCED FARM IN UTAH.  
(Continued from page 3)

of them, and so they have been omitted from our tables.

In Table No. 3 are given the comparative yields and the comparative costs of these different sized orchards. It will be noticed that the smallest orchards are the most expensive per acre, while the yield is a little less than that of the medium sized ones. One the other hand in the larger orchards, while the costs are considerably less, the yield is proportionally still less. There is some unexplained factor here, either the less expense of handling means less care and attention or else the larger areas were planted on poorer land or some other factor intervenes that materially affects production. Professor Lewis has left this table to be interpreted as we please.

After carefully considering the matter, however, the writer thought that these three conditions might to some extent offset each other and that the averages might give us the most valuable comparative data for our conditions, and so a column of averages has been appended to each table.

Going back to the beginning and considering them in order, Table No. 1 shows the comparative investment per acre in orchards of different ages and different sizes. The first cost is not given but from the interest charged the second year, the land with necessary buildings and equipment must have averaged 430 dollars per acre. The home itself is not included in the buildings.

Professor Lewis also divided his orchards into three ages:

Non-bearing archards from 2 to 5 years.

Beginning-to-bear orchards from 6 to 9 years.

Bearing orchards from 10 to 18 years.

These have been plotted separately in each case and where comparisons were possible the figures have been averaged.

The cost of producing an orchard was divided into three heads: "Overhead Expenses," "Growing Costs" and "Handling Costs." Overhead expenses, as shown in Table No. 2, included interest on the investment at six per cent, taxes, insurance and depreciation. These were greater per acre on the small orchard than on the large ones, largely due no doubt to the fact that it requires just as many buildings and as much machinery to handle a small acreage as it does to handle a larger one. As the orchards grow older the overhead expense increases, being 38, 58 and 69 dollars per acre on the different ages considered.

Growing costs are shown in Table No. 3. They included cultivation and irrigation, pruning, spraying, thinning, propping and miscellaneous costs. These costs also were greater on the small orchard than on the larger ones, partly due to better care and partly to poorer facilities. They also increased with age, running from 20 dollars per acre on the non bearing, to 36 and 42 on the older orchards. Four sprayings were the usual number, except in Group III. It was found that it cost nearly as much to thin a small crop as it did a large one due

TABLE NO. 3. GROWING COSTS (PER ACRE).				
Group	I	II	III	Average
Average acres (7)	(7)	(17)	(28)	
2—5 yrs.				
Pruning	2.59	1.06	2.32	2.00
Cultivating	5.98	8.27	5.50	6.65
Spraying	5.74	2.64	3.34	3.90
Irrigat.	1.58	4.79	3.00	3.20
C. and F.				
Misc.	4.78	2.25	1.78	2.90
Totals	21.00	21.00	17.00	20.00
6—9 yrs.				
Pruning	6.84	5.55	3.51	5.30
Cultivating	6.00	5.76	7.13	6.30
Spraying	11.35	12.31	6.06	9.90
Irrigat.	5.55	2.65	2.79	3.70
C. and F.				
Thinning	2.67	4.75	1.43	3.00
Propping	2.78	3.25	2.60	2.90
Misc.	6.25	1.56	1.32	3.00
Totals	44.00	37.00	27.00	36.00
Boxes per yr. (150)		(158)	(95)	
10—18 yrs.				
Pruning	7.53	7.06	6.72	7.10
Cultivating	5.53	5.93	6.54	6.00
Spraying	17.02	10.52	5.24	10.90
Irrigat.	3.38	4.63	1.62	3.20
C. and F.				
Thinning	9.05	5.57	4.35	6.30
Propping	3.85	4.35	3.43	3.90
Misc.	2.37	1.87	1.85	2.00
Totals	52.00	42.00	32.00	42.00
Boxes per yr. (225)		(286)	(188)	

TABLE NO. 4. GROWING COSTS (PER ACRE).							
Age.	Pruning	Cultivation	Spraying	Irrigation	Thinning	Propping	Misc. Total Cost
2—5	2.00	6.65	3.90	3.29			2.90 20.00
6—9	5.30	6.30	9.90	3.70	3.00	2.90	3.00 36.00
10—18	7.10	6.00	10.90	3.20	6.30	3.90	2.00 42.00
		6.30		3.40			2.60

TABLE NO. 5. HANDLING COSTS. (TREE TO WAREHOUSE)				
Picking	.04			
Hauling	.01			
Grading	.04			
Packing	.045			
Box (made)	.11			
Paper	.035			
Haul and Inc'd.	.35			
			.315 per box	
			(Warehouse to Purchaser)	
Ware house	.04			
Selling	.115			
			.155 per box	
			.47 per box.	

TABLE NO. 6 TOTAL AVERAGE (PER ACRE)					
Age	Overhead	Growing	Total	Yield	Handling
1st Yr.					
2—5 yrs.	38	20	58		
6—9 yrs.	58	36	94	134	63
10—18 yrs.	69	42	111	233	110

TABLE NO. 8. RETURNS FROM UTAH APPLES.			
	1913	1914	Average.
High grade Jonathan—Winesap	1.50	.80	1.15
Low grade Ben Davis—Gano	1.13	.57	.85
Average both	1.31½	.68½	1.00


to the fact that on a light crop the fruit usually grows in bunches, while on the heavier crop it is often more evenly distributed.

Table No. 4 summarizes the growing costs in a different way and shows that cultivation costs about the same throughout the entire life of the orchard—about \$6.30; that the cost of irrigation was fairly constant at an average of \$3.40; and that the miscellaneous expenses in the same,

averaged \$2.60. Other expenses, such as pruning, thinning and propping increased with the age of the trees. This bulletin brings out the fact

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that overhead costs and growing costs can only be satisfactorily figured on the acre basis, because yields vary so much, while handling costs, that is the cost of handling an apple from the time it is taken from the tree until it is sold, can best be figured on a box basis, as the cost will be almost directly proportional to the yield. The handling costs were so nearly alike on all sizes of orchards and ages of trees that they have been all taken together and averaged in Table No. 5. The total of 31½ cents per box from the tree to the warehouse is not much higher than our figures. The additional cost is very largely due, no doubt, to the individual paper wrapping and excessive care that they give their high grade fruit. Much of this fruit has to be wiped to get rid of the heavy coating of spray that it has received.

Table No. 6 summarizes the total average costs per acre at the different ages, divided so as to show the overhead and growing cost which must be met every year, segregated from the cost of handling a crop, which will of course vary with the years. An average cost before harvesting of over 100 dollars an acre is shown, and an average harvesting cost of nearly the same.

Table No. 7 gives the same figures reduced to the basis of the box, taking the average production given in the Bulletin as a basis. The average cost of producing a box of apples on a young orchard is shown to be 70 cents as against 48 cents on the mature one, while the handling would be the same, or 47 cents, making a total cost of production of a packed box \$1.18 on the young orchard and 95 cents on the full-bearing one. These costs are excessive and indicate why orcharding has not been profitable in the past.

It must be remembered, however, in considering all of these statistics that they are based on the orchards of the Northwest, mostly grown in volcanic ash soil that has been reclaimed from brush or timber and the orchard planted at once;—that clean cultivation has been practiced and that on account of lack of fertility or shortage of water in many cases this was the only practicable method,—that the low yields quoted are very largely due to the fact that the majority of the apples of this district are Newtons, Spitzenbergs and other high class apples, all of which are inclined to be late maturers and shy bearers;—and that while these factors increase the cost per box, the quality of the apple increases the possible returns in the same proportion.

The value of these tables is not so much in the facts that we get from them, as in the warning they convey, and this warning which seems to me to stand out in almost every figure of every table, is: that under present conditions it costs too much to produce a box of apples. That, appears to the writer to be the keynote of the trouble in the Northwest, and while, as will be shown later, it does not cost as much to produce a box of Utah apples, still the fact remains that it still costs too much and that probably the solution of the orchard problem is to reduce that cost. The reduction in the cost of production of ten cents per box would in itself give the fruit grower a reasonable margin of profit and put the industry on a stable basis.

The pessimist at one time saw the enormous waste of fruit in the orchards of the State and gave that as the cause of disaster—adding that by-product factories would be the salvation of the fruit industry. Personally the writer is not counting on that kind of salvation. No one can predicate the future, but to date the only really successful by-product plant the writer has seen is not a plant at all, but an animal—the pig. May his tribe increase.

The pessimist at another time blamed the marketing facilities for all our troubles, and indicated that when we obtained the true value for our apples, our troubles would cease. The personal opinion of the writer is that we need not expect to receive very much more in the future for our apples than we have in the past. That may not sound very optimistic, but is optimistic if the facts are known. Table No. 8 gives the average returns for Utah apples from the State Association for the last two years, omitting the low grade residue that went to storage last year. Last year was admitted as the worst year that has ever been experienced, so that an average that includes these returns should be conservative enough for even a pessimist.

Studying this table we see that Extras of High grade apples brought an average of \$1.15 for the two years, while low grade ones averaged 85 cents, or an average of just exactly \$1.00 per box.

The previous tables have shown that the cost of production even under the excessively expensive methods of the Northwest have not equalled that figure in the mature orchards. Under Utah conditions we can easily reduce that cost 15 cents, giving us a profit of 20 cents per box after all expense and interest on the investment has been taken out. With an average yield of only 300 boxes per acre from mature orchards this would give a 6 per cent profit on an investment of 1000 dollars per acre.

If this solution of the case is correct, then the problem before us is how to reduce the cost of production. This will be discussed in the next issue of the Utah Farmer.


—o—

OPPORTUNITY.

They do me wrong who say I come no more,  
When once I knock and fail to find you in,  
For every day I stand outside your door;  
And did you awake and rise to fight and win.  
Wail not for precious chances passed away,  
Weep not for golden ages on the wane;  
Each night I burn the records of the day,  
At sunrise every soul is born again.  
Laugh like a boy at splendors that have sped,  
To vanished joys be blind and deaf and dumb;  
My judgments seal the dead past with its dead.  
But never bind a moment yet to come.  
Though deep in mire, wring not your hands and weep,  
I lend my arm to all who say: "I can."  
No shamefaced outcast ever sank so deep  
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Established 1904

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#### OFFICIAL ORGAN

Utah Horticultural Society, Utah State Dairymen's Association, Utah State Bee Keepers' Association, Bear River Valley Farmers' Protective and Commercial Association, Agricultural College Extension Department and Utah State Fair Association, Utah-Idaho Millers' and Grain Dealers' Association, Utah Fruit Growers Association.

#### OUR GUARANTEE

We guarantee every subscriber against loss thru dishonesty or attempted swindle by any advertiser in this publication. We do not attempt, however, to adjust trifling differences between the subscribers and honest, responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within thirty days from date of the transaction, and the subscriber must have mentioned Utah Farmer when writing the advertiser.

What a fine thing it is to have a clear conscience, knowing we have done the best we knew how.

What we need in this state is more good dairy cows. If you cannot buy them, you can, at least, save the best heifer calves, and produce some cows on your own farm.

Just because it is New Year's, don't start something that you don't intend to finish.

How about the poultry conventions to be held in the different parts of the state? Are you going to take part in any of them?

There is profit in a few sheep on every farm. Often they can be feed on the waste around the place. Don't be afraid to try a few sheep.

Now is the time of the year to get your manure out on the land if you have not already done so. Clean up every bit of it around the barn and yard and put it on your land where it will do some good. Use plenty of straw for bedding the live stock and in this way secure an additional amount of good manure.

The close of the year is here. In reflecting over the work of the past twelve months have you taken advantage of all the opportunities that came your way? What did you learn about the farming business? Think over some of these things and plan for 1916 with the idea that you will profit by any mistake made last year.

Plan now to harvest enough ice for next summer's supply. It will cost very little and will be a fine thing to have plenty next summer.

It was a fine snow storm. The wind that came with it has blown the snow into the ravines and canyons, storing it up for next year's water supply.

There is a great change in the spirit of the farmers today. There never was a time when they had a greater desire to get together, to work for the benefit of all. This condition is being reflected by the great number of associations that are being formed, such as the Farmers' Bureau, and the other organizations. Right now is the time to get together.

You need not spend an idle day on the farm if you will just look around and see the many things there are to do at this time of year. Machinery to be repaired, cleaned, painted and put in order for next summer's work. Sharpen your tools, grind your discs, and repair wagons and buggies. In fact anything that you can do now that will help lighten the rush of next spring and summer will be time well spent.

Don't forget the annual inventory. This is the best way to tell whether or not you are making money. Be careful in listing all of your live stock, machinery, etc., so that it will be accurate, and then during the year keep account of all you pay out, and you receive, and in this way find out what you are doing. If you want to go to the trouble, you can make departments, showing the cost of producing and maintaining the different branches of your farm work.

We wish for our readers, every one of them, a happy and a prosperous New Year. To be happy each individual must feel this way, and help to make others with whom they come in contact, enjoy the same spirit of sunshine. To be prosperous you must lay your plans well, and carry them out to the best of your ability. We have learned that wishing will never bring either happiness or prosperity, but we really have a desire in our heart that every one of our readers shall be happy, and prosperous, and we are going to do all that is in the power of the Utah Farmer to bring about these conditions.

#### KNOW YOUR NEIGHBORS.

In the larger cities people live in flats, there may be eight or ten families living in the same building, and one-half of them will not know who the other people are. There are no such extreme conditions in the country, but still we do not know our neighbors well enough. Up in Wisconsin they have a slogan; "Get acquainted with your neighbor—you might like him." This might be put in practice in any community for there seems to be a need of more neighborliness. This lack of neighbors not knowing each other is not a new thing for many years ago similar conditions existed. Cato, is credited with saying:

Be a good neighbor. If the neighborhood regards you kindly you will find a readier market for what you have to sell, you will more easily get your work done either on the place or by contract. If any misfortune should overtake

you, which God forbid, they will protect you with kindly interest.

There are many reasons why you should know your neighbors, so many ways you can co-operate, and help each other that we should all learn to know our neighbors.

#### ALWAYS KEEP LEARNING.

In nearly every section there are farmers who tell you that they do not believe in "book learning." There are others who, when you suggest they go to an agricultural lecture or a farmers' institute will tell you, "I know more about farming than them fellows do." Yet these same men are not willing to impart any of this wonderful knowledge they are supposed to possess.

How different we see and do things to what we used to see and do them. It was only a few years ago that we talked with some of these farmers and they made all kinds of fun about dry-farming, yet today these same men are dry-farming. They have changed their minds and why? They have either been reading or attending some of the institutes or may have copied from some one who has done both of these things.

When a man undertakes dry-farming there are many questions he must understand if he would be successful. If he does not do it right he will loose both time and money. What is true of dry-farming is also true of most every branch of farming. Almost any phase of farming can be discussed with profit by experts and practical farmers. Our suggestion is to have one or more good farm journals, attend the farmer meetings, read, think and plan your work.

#### HORTICULTURAL CONVENTIONS.

The conventions held at Provo and Ogden by the State Horticultural Society were very interesting. One of the main subjects discussed was the cost of production, and how to lessen it. It was the sentiment of a number present that the Fruit Industry depends not so much on higher prices in the selling market, but lowering the cost of production. How many people are there who have produced an orchard up to the bearing age, who really can give the actual cost of doing so?

Unprofitable varieties should be eliminated from our orchards, and places that are undesirable for the raising of fruit must be cropped to something else that is more suitable to that location and soil.

Considerable interest was taken in the question of the development of evaporation and canning plants. The conventions were very hopeful that some means would be found to organize themselves sufficiently strong, so that the by-products will be taken care of.

The half-hearted fellow who is in the fruit producing business is going to get out of it. Those who have good land, well adapted for fruit growing will stay with it, and make a success of it. The day of "Wild Catting" or raising orchards, promising ridiculously large returns is practically over. The fruit business, like any other business, must have careful, intelligent direction, and will only be made a success by men who really love the work. The Fruit business is going through an adjusting period which, in the end, will be best for all concerned.



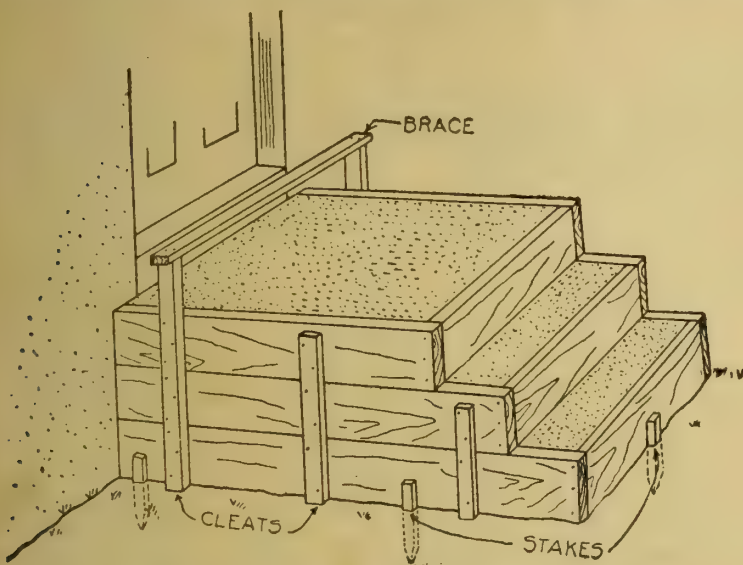
## Simple Concrete Step Construction

Steps are not only subject to hard usage, but when constructed of wood with the lower part in contact with the ground and subject to alternate wetting and drying, decay is very rapid, making them unsafe and dangerous. Steps at the rear of kitchen entrance of the house encounter especially hard usage, but it is a very easy matter to have them durable and safe by constructing them of concrete. A simple method of doing this is shown in the accompanying drawing. The three forms consist merely of that many boxes open at top and bottom and also at the end adjoining the door-sill.

A rise of 8 inches and a tread of 10 inches will be found convenient. For this reason the height of each box should be 8 inches, since every

second and smaller box is placed on top of the first one, being fastened thereto by a few nails through the upright cleats shown in the drawing. The nails must not be so long as to project through the forms and into the concrete. Fill the second box with concrete immediately, being careful that no dirt or other foreign matter falls or collects on the surface of the first batch of concrete, as this would prevent a good bond between the two layers. Finish this step or slab in exactly the same manner as described for the first step. The last or third step is constructed in exactly the same manner as those previously described.

The brace between the two back cleats is for the purpose of preventing the boards from spreading at the side



Simple Forms for Constructing Concrete Steps

box will form a step. All of the boxes should be of the same width, but each one is 10 inches shorter than the one beneath it, thus forming the tread of the step. If the steps are few in number and not too wide, 1-inch boards will be stiff enough to hold the concrete without bulging, but if there is any doubt about this it is better to use 2-inch plank. The concrete for the steps should be mixed in the proportion of 1 bag of Portland cement to 2½ cubic feet of clean coarse sand to 4 cubic feet of crushed rock or pebbles. The earth beneath the steps should be excavated to a depth of 6 inches below the surface, the excavation being the exact size of the bottom of the steps. Make sure that the earth is level and compact at the bottom of the excavation. Place the largest box in position around the edge of the excavation, staking it in place at two or three points to prevent shifting. Level the first box very carefully by means of a carpenter's spirit level. The concrete, mixed rather dry, should be deposited in the box and thoroughly tamped and compacted until moisture rises to the surface. Work or spade the concrete thoroughly along the sides of the forms so as to produce a smooth surface. At the front end of the box, where the concrete becomes the tread, the surface of the concrete is carefully leveled off and smoothed with a trowel for a distance of about twelve inches from the outer edge. Immediately after this is done the

next to the wall. The outer surface of the top step is carefully leveled off with a straight-edge and finished by troweling to a smooth surface. Excessive troweling, however, must be avoided. Not more than a half hour should elapse between placing the concrete for each step so that the concrete first deposited will not harden and set up before the next form is filled. After the steps are about one week old, the forms may be removed and the steps used. After the forms are removed any roughness or irregularities may be smoothed down and the surface of the entire steps finally finished by rubbing with an old piece of emery wheel and water or carborundum and water. Where the work includes many steps, a hollow space is generally left under the main body of the steps to effect a saving in materials. Where this is done the platform and steps are reinforced with steel rods or heavy wire mesh to prevent cracking.

### CELLAR-FORCED PIE PLANT

Fresh pie plant pie may be supplied in place of that made of dried and canned fruits on almost any farm. The fact is well enough known to expert gardeners who obtain fancy prices by what are known as forcing methods, but similar results may be secured by any one in either the city or the country if he has (1) a few clumps of pie plant; (2) a cellar which can be kept at about 60 degrees Fahrenheit, and can be partially dark-

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ened; and (3) a cinder bed three or four inches deep which can be kept wet, but well drained.

Dig up the crowns, or bunches, of pie plant any time after the tops have been killed by cold weather and before the ground is frozen so hard that digging is impossible. Leave plenty of earth around the plant, and if it has not already been frozen for a while, pile it up on the north side to freeze, where the sun can not reach it and tempt out any of the leaves. The plant, like men, must have a rest period, but the pie plant does not need to rest all winter, and if protected a little while from the rain and sun, it can be taken into the cellar and set to work again by planting the roots there or four inches deep in a bed of cinders which have no ashes mixed in them. The cinders should be kept as moist as possible, but the drainage should be good enough to prevent any water from standing around the roots. There is so much plant food stored for next year's growth, that no soil or manure is necessary, but moisture and warmth will soon bring out the long, pale, crisp, thick stems with smaller leaves and less fibre than usually are produced in the garden, and the result is that these stems have a finer texture and flavor and better cooking qualities. One cutting will not exhaust the plant food, but other stems will be produced as long as any food is left in the roots if the temperature is kept up and watering is continued.

If the basement is too well lighted, the windows should be partially covered to weaken the light and compel the stems to lengthen in search of the sun. It will only be about two weeks from the time of planting in

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the cinders until the first pies may be made. Pulling may be done as in the garden and continued for several weeks.

This winter crop of pie plant will off-set any loss through injury to the bed from which the roots are taken, but this injury may be repaired by dividing each of the remaining clumps into two parts with a spade in the spring, and resetting half of each clump or crown in the hole left by the removal of the plant for forcing during the previous winter.—Missouri Agriculture College.

Remember that every man at times stumbles and has to be helped up; if he's down you cannot carry him. The only way in which any man can be helped permanently is to help himself.—Theodore Roosevelt.



## THE HOME

### USE OF WINTER VEGETABLES.

Blanche Olin.

At this time of the year it is the housewife's greatest care in the planning of meals to prepare foods in as many different ways as possible. Winter seasons do not offer us a great variety of foods. For the wide range of fresh vegetables and fruits which can be obtained in the summer, canned fruits and vegetables must be substituted and, in order to give variety those vegetables which keep through the winter should be prepared in many ways so that they do not become tiresome. Winter foods are heavy, rich foods at best. Pastries, puddings, rich gravies, often form a large part of the winter diet. Consequently, vegetables, particularly in the form of salads, act as a corrective, giving the system those valuable substances which maintain good health. All vegetables contain much mineral matter, which greatly aids digestion and keeps the blood in good condition; and woody fibre cellulose, that portion which forms the framework of the vegetable, particularly the skin, making it hold its shape. This woody fibre cannot be digested by the human organism, but is immensely valuable in furnishing the bulk necessary to prevent clogging of the digestive apparatus due to the eating of concentrated rich foods. Consequently, serving of at least two vegetables for the mid-day meal is more essential in winter than it is in summer. The food value, which they yield, may be shown in the following table:

<b>The Seeds—</b>	} Contain all food-stuffs high in protein (tissue building food)
Peas, beans, lentils, corn and eggplant.	

<b>Roots—</b>	} Contain all food-stuffs low in protein and fat. High in starch and sugar. (Energy yielding foods.)
Beets, parsnips, turnips, carrots, radishes, sweet potatoes, oyster plant.	

<b>Tubers—</b>	} Contain all food-stuffs in small amounts. Mineral matter is chief value.
Potatoes, Jerusalem artichokes.	

<b>Bulbs—</b>	} Contain all food-stuffs in small amounts. Mineral matter is chief value.
Onions, garlic.	

<b>Rinds—</b>	} Contain all food-stuffs in small amounts. Mineral matter is chief value.
Squash and pumpkin.	

<b>Leaves—</b>	} Mineral matter is chief value.
Cabbage, lettuce, spinach, water-cress, brussels sprouts, Asparagus and celery.	

Those vegetables which are high in protein may often be substituted for meat so that when we serve baked beans and baked corn, creamed peas, or fried eggplant, it is not necessary to serve meat.

The time for cooking vegetables is so variable at different seasons of the year that it is impossible to give any definite number of minutes for each vegetable. It is well to remember, however, that the higher the altitude the longer time is required to

sift it. Old and wilted vegetables, such as beets and carrots, often become woody, and more time is needed to make the woody fibre tender. If wilted vegetables are soaked in cold water an hour before cooking, they regain their shape and crispness, resulting in a mealy product rather than a soggy one. Strong-odored vegetables such as cabbage and onions should be cooked with out a cover. In this way the odor escapes gradually, proving not nearly so permeating as when it is liberated in violent puffs of steam from underneath the cover. When vegetables are baked no nutritive value is lost and the high temperature of the oven develops flavor. The delicious characteristic flavor of baked potatoes is due in large part to the fact that all the mineral substances lying just under the skin are retained. If vegetables are steamed (cooked in a steamer over boiling water) they lose no nutritive value but do not retain their full flavor. Stewed vegetables, which are cooked in so little water that it is almost evaporated by the time the vegetables are tender, do not lose much food material because the water in which they are cooked is served with them, together with butter and other seasonings. This is a much better method than the usual process of boiling vegetables in a quantity of water, which dissolves much of the flavoring materials and when drained off proves very wasteful. Vegetables when cooked too long are liable to become soggy and water-soaked. As soon as they are tender they should be served. Better than pricking with a fork to test them is to use a slender knitting needle kept for that purpose. It pierces them in just one place, whereas a fork makes several holes, and often breaks the vegetable. The chief reason for cooking is to make the vegetables tender and to thoroughly cook what starch it may contain, but while we are performing this needful operation we should also be very careful to retain the natural flavor and to serve well-seasoned and hot.

#### Recipes.

**Harvard Beets.** Use cold boiled or canned beets. Cut into eights and heat in the following sauce: Mix one-fourth cup of sugar and one-half tablespoon corn starch. Add one-half cup vinegar and let boil five minutes. Pour over beets and let stand on back of range one-half hour. Just before serving add two tablespoons butter.

**Beets with Corned Beef Hash.** Remove skin and gristle from cooked corned beef, then chop the meat. When meat is very fat, discard most of the fat. To chopped meat add one-half as much of cold boiled finely chopped beets. Season with salt and pepper, put into a hot buttered frying pan, moisten with milk or cream, stir until well mixed, spread evenly, then place on a part of the range where it may slowly brown underneath. Turn, and fold on a hot platter. Garnish with sprig of parsley in the middle. Cold roast beef or one-half roast beef and one-half corned beef may be used.

**Sour Sauce Beets.** Wash beets and cook in boiling salted water until soft. Drain, and reserve one-half cup of

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AT THE

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### Special Emphasis will be placed upon:

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Farm Repair Work and Horseshoeing—in shops.  
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Home Nursing—in Women's Building.  
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water in which beets were cooked. Plunge into cold water, rub off skins and cut into cubes. Reheat in Sour Sauce. Melt two tablespoons butter add two tablespoons flour, and pour on the beet water. Add one-fourth cup, each, vinegar and cream, one teaspoon sugar, one-half teaspoon salt, and a few grains pepper.

**Stewed Beets.** Boil them first, and then scrape and slice them. Put them into a stew pan with a piece of butter rolled in flour, some boiled onion and

partly chopped fine, and a little vinegar, salt and pepper. Set the pan on the fire and let the beets stew for a quarter of an hour.

**Baked Beets.** Beets retain their sugary, delicate flavor to perfection if they are baked instead of boiled. Turn them frequently while in the oven, using a knife, as the fork allows the juice to run out. When done remove the skin and serve with butter, salt and pepper on the slices.

**Cabbage.** The method given makes



cabbage a delicious and attractive vegetable, as delicate as cauliflower, and the odor in the kitchen is not noticeable. Select a small cabbage, with the ribs in the leaves not too thick. Prepare the cabbage before washing it by cutting out the stalks from below with a sharp knife. Separate the leaves. Have ready the largest kettle available, nearly full of rapidly boiling water. Drop in one cabbage leaf at a time, pressing each one down with a long-handled spoon or skimmer. Do this so slowly that the water does not stop boiling. Leave the kettle uncovered and allow the cabbage to cook from 12 to 15 minutes, depending on the thickness of the leaf stalks. Remove the leaves with a long-handled skimmer, putting them into a colander standing on a plate. Immediately pour the hot water down the sink drain, turn the cold water to flush away the odor, and fill the kettle with cold water. While the cabbage is cooking you have made a pint of white sauce, adding a teaspoonful of salt, and have prepared one-half cup of buttered crumbs. Cut the cabbage leaves lightly, place them in a baking dish, pour the white sauce over them, sprinkle the crumbs on the top, and brown the crumbs in the oven or under the gas. If you can, prepare this as a surprise at home and ask the family to "guess" what it is. If the cabbage is a good one, some of the leaves turn a very pretty green with this method of boiling.

**White Sauce.** Two tablespoonful of fat, two of flour, one-half pint liquid. Melt the fat in a saucepan. Pour in flour all at once and stir the flour and fat together until the mass thickens slightly. Pour in all the liquid at once, cold. Set the saucepan where the heat is moderate. Stir steadily with wooden spoon until mixture thickens, boiling three minutes.

**German Cabbage.** Slice red cabbage and soak in cold water. Put one quart cabbage in stewpan with two table-spoons butter, one-half teaspoon salt, one tablespoon finely chopped onion, few gratings of nutmeg and a few grains of cayenne; cover and cook until cabbage is tender. Add two table-spoons vinegar and one-half table-spoon sugar, and cook five minutes.

**Smothered Cabbage.** Take off outside wilted leaves from a firm, medium-sized cabbage, cut in quarters and remove tough center portion; then finely chop or force through a meat chopper; there should be five cups. Melt five tablespoons butter in hot iron frying pan, add two table-spoons flour and stir until well blended; then pour on gradually, while stirring constantly, one cup milk. Bring to the boiling point and add two teaspoons salt, one-fourth teaspoon pepper, and cabbage. Mix thoroughly, cover, put on back of range and cook slowly from fifty to sixty minutes.

**Ladies' Cabbage.** Boil a firm, white cabbage fifteen minutes, changing the water then for more from the boiling teakettle. When tender drain and set aside until perfectly cold. Chop fine and add two beaten eggs, a tablespoonful of butter, pepper, salt, three tablespoonfuls of rich milk or cream. Stir all well together and bake in a buttered pudding dish until brown. Serve very hot. This dish resembles cauliflower and is very digestible and palatable.

**Fried Cabbage.** Place in a frying

pan an ounce of butter and heat it boiling hot. Then take cold boiled cabbage chopped fine, or cabbage hot, cooked the same as steamed cabbage, put it into the hot butter and fry a light brown, adding two tablespoonfuls of vinegar. Very good.

**French way of Cooking Cabbage.** Chop cold boiled white cabbage and let it drain till perfectly dry; stir in some melted butter to taste; pepper, salt and four tablespoonfuls of cream; after it is heated through add two well-beaten eggs; then turn the mixture into a buttered frying pan, stirring until it is very hot and becomes a delicate brown on the under side. Place a hot dish over the pan, which must be reversed when turned out to be served.

**Stuffed Cabbage.** One small solid head of cabbage, one cup bread crumbs, two teaspoons butter, one-fourth cup chopped peanuts, salt and pepper to taste, enough hot water to moisten; cold chopped meat may also be added. Remove large outer leaves from cabbage and save. Remove the center portion and chop. Mix all ingredients and moisten with hot water. Stuff the cabbage with the dressing. Place large leaves over the opening and wrap in a white muslin cloth. Steam or boil until cabbage is tender. Take from steamer, unwrap and sprinkle buttered crumbs over the top. Bake in a moderate oven until crumbs are browned.

**Stewed Carrots.** Wash and scrape the carrots and divide them into strips; put them into a stew pan with water enough to cover them; add a spoonful of salt and let them boil slowly until tender; then drain and replace them in the pan, with two tablespoonfuls of butter rolled in flour, shake over a little pepper and salt, then add enough cream or milk to moisten the whole; let it come to a boil and serve hot.

**Mashed Carrots.** Scrape and wash them; cook them tender in boiling water salted slightly. Drain well and mash them. Work in a good piece of butter and season with pepper and salt. Heap up on a vegetable dish and serve hot.

**Carrot Timbales.** Wash and scrape carrots. Cut off the deepest colored portion in thin slices, lengthwise of vegetables, and fill a quart measure packed solidly. Cook in two tablespoons butter ten minutes, stirring constantly; then cover with boiling water or stock and cook until soft. Drain and force through a puree strainer. Add two whole eggs and one egg yolk slightly beaten, and season with salt and pepper. Fill buttered timbale moulds (garnish with hard-boiled egg, cut in fancy shapes) two-thirds full, set in pan of hot water, cover with buttered paper and bake fifteen minutes.

**Mint Glazed Carrots with Peas.** Scrape three medium sized carrots, cut in one-fourth inch slices, then in strips or fancy shapes, using French vegetable cutters. Cook in boiling, salted water fifteen minutes and drain. Put in saucepan with one-half cup butter, one-half cup sugar and one tablespoon chopped fresh mint leaves. Cook slowly until soft and glazed. Drain and rinse thoroughly one can French peas. Cook ten minutes in boiling water to cover drain, and season with butter, salt and pepper. Turn peas on hot serving dish and surround with carrots.



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**Carrots, Poulette Sauce.** Wash, scrape and cut carrots in strips, cubes, or fancy shapes, cover with boiling water, let stand five minutes; drain and cook in boiling salted water, to which is added one-half tablespoon butter until soft. Serve with sauce made of three tablespoons butter, three tablespoons flour, one cup chicken stock, and one-half cup cream. Season to taste with pepper and salt, and just before serving add yolks of two eggs and one-half table-spoon lemon juice.

If baby beets and baby carrots are canned when they are the right size you will find them a valuable addition to any diet. Blanch them by plunging into boiling water for five minutes and then into cold water for one minute. Scrape off the skins and pack into cans. Cover with hot water, using one teaspoon salt to every quart. Place jars in water bath and cook one hour. These are ready for serving in any of the different methods and are sweeter and far more tender than if they had been allowed to grow larger.

Now is the time to renew your subscription to the Utah Farmer.—

### SANDWICHES IN THE

#### SCHOOL LUNCH.

Well prepared sandwiches should form an important part of every school lunch. They are easily made and should be very wholesome and palatable. Variety is the spice of life here as elsewhere and there should be at least two kinds of sandwiches in each lunch. The number and kind may be varied from day to day.

Cut the bread for sandwiches into thin slices of uniform thickness with a sharp knife, and spread the butter evenly over both slices of bread in order to keep it moist and prevent any fruit filling that may be used from making the sandwiches soggy or indigestible. Sandwiches made several hours before they are to be eaten should be wrapped in a moist cloth and kept in a cool place, or wrapped in wax paper, to prevent them from drying or absorbing odors.

In giving these directions for making sandwiches, little is said about meat sandwiches because most people are familiar with the ordinary ham sandwich, and in many cases such meat substitutes as peanut butter, eggs, or cheese should be used instead of the more expensive meats.



## Here and There On The Farm

### LESSONS OF WET WINTER

#### AND DRY SUMMER.

It is to be wondered how many farmers have grasped the lesson which has been taught by the wet winter, followed by the dry summer, which have just passed into history. In the dry-farming districts the farmers generally laughed at the idea of attempting to conserve the heavy rainfall, because they thought they were getting more than they needed. However, those farmers who had a large acreage of land plowed in the fall to catch the winter rainfall succeeded in making a success of their summer crops, while those who did not make this preparation have failed. Again, those who made an attempt to hold the moisture received last winter by constant tillage during the spring and summer have made good, whereas those who said it was no use to cultivate have failed. In the irrigation districts many new settlers believed, and still believe, that the wet winter proved that they could practice dry-farming and that similar rains would occur again so that they would not have to irrigate. Such farmers are doomed to disappointment since, in the irrigated regions at the lower elevations, irrigation water must absolutely be depended upon to insure crops. Such heavy rains as occurred last winter may not come again for ten or more years. A word of caution should also be given to those who like to believe that the climate is changing. The land boosters would like to have you believe this and would like to know that it was true themselves; but it is not. Methods of farming must be used which are based upon the most extreme arid conditions which may be expected to occur at any time. Attempted systems of farming based on any other idea are doomed to failure.

#### WHAT MAKES WOOD FLOAT.

That wood floats is such a commonplace fact in our lives that we hardly give it any thought. If we lived in tropical climates we would learn to distinguish between woods that float and woods that do not float. Many of the woods of Mexico and South America are so heavy, even when perfectly dry, that they will sink in water, notably lignum-vitae, which is the wood commonly used for bowling balls.

Among our common native woods there are several that will not float when green. The cypress of the South is often girdled a year before it is cut so that it will die and dry while standing, thus making it possible to float the logs to the mill. At the Forest Products Laboratory, Madison, Wis., where the green or dry weight of all wood that is tested is determined, it was found that the green heartwood of some oaks and hickories and the green sapwood of certain conifers is so heavy that when these parts of a tree are put into water separately they will sink, although the entire log will float.

The reason why some woods float is not because the substance of which they are made is lighter than water, but because the cavities in the cells are so large that the air in them buoy up the wood. The material (cellulose) which composes the

greater part of the cell wall is heavier than water, so that if the air in the cell is replaced by water the wood will sink. This is just what happens to wood which has been in water for a long time and has become "water-logged."

It is the large water content of the heartwood of freshly-felled oaks and hickories and of the sapwood of certain conifers that causes these woods to sink, for when dry they will float.

Lignum-vitae and other heavy tropical woods, even when dry, sink because most of the cell cavities are so small compared to the thick cell walls that the air in the cavities is not enough to float the wood.

#### INVENTORY

##### Farmers Should Make Inventory at Close of Year.

The young farmer who is endeavoring to build up a more efficient and profitable business seldom retains much cash. When money is received he buys a new implement, another animal, improves a building, or makes payments on bills for things bought on credit. During the course of the year he may receive and pay out large sums of money, leaving almost no cash at the end of the year. The annual returns may seem to have been only a fair living for himself and family, whereas the farm business may have turned a good profit, which was invested from month to month. Hence it is important for the farmer's guidance and encouragement that he make an annual inventory of his farm investments. This inventory should be a detailed list, with values, of everything used in the farm business, including land, buildings, live stock, machinery and tools, produce for feed or sale, supplies, bills receivable, and cash; also a list of all accounts and bills owing. The difference between the total assets and debts shows the net farm worth.

#### ARE YOU LOSING MONEY?

Farmers are asking themselves "what have I made the past season and from what have I made it?" If they had a simple form of farm accounts this question would be easily answered. Now is the time to start. Take an accurate inventory of all properties, supplies, crops, costs, accounts received, and debts owed such as mortgages, notes, etc., and determined your present worth by subtracting what you owe from your assets. Then during the year keep a simple system of accounts with each department of your farm. At the close of the year make another inventory and from your present worth subtract your worth a year ago, the difference will indicate your earnings for the year.

If you deduct your wages and those of your family, it will show you what your property has brought in. Maybe your earnings are not paying interest on your investment. Find out, and if they are not, make a change for the farm will pay if it is properly managed. A book for keeping these accounts can be secured from the Agricultural College, Logan, Utah. It only costs 25c and every farmer should have one.

#### DIPLOMATIC

"Hullo, is that you, dear?" called the fond husband into the telephone. "Yes," came the answer over the wire.

"I'm bringing Green cut to dinner tonight. We'll be along in about half an hour."

"Oh, goodness" gasped his invisible wife. "How many times have I told you not to ask your friends here without giving me notice? If he must come, he'll just get some cold lamb and potatoes fried up, and not another bite. I'm not going to stand over a cooking stove at this time of night for Green or anyone else. If he doesn't like it, he can lump it. And I don't like Mr. Green, anyway!"

"All right, dear. We'll be along soon."

"What did your wife say?" asked Green, as the other hung up the receiver.

"Oh, she's as pleased as anything about it! Wanted to know why you'd never been before. Come on!"

Where is your machinery? Under the shade of an apple tree? Arrange to house it this winter and prolong its life two or three years. Don't be such a ready contributor to the scrap pile. Save your hard earned money by taking care of your machinery.

Apply a little cup grease to the moldboard and share of your plow. Put some kerosene in the cylinder of the gas engine. Rub with a good grade of oil those parts especially subject to rust. In a word provide oil and winter quarters for every piece of machinery. You will see the results of your efforts next harvest.

#### MORE SENSE THAN POETRY

My friend have you heard of the town of Yawn  
On the banks of the river Slow,  
Where blooms the Waitwhile flowers fair,  
Where the Sometimeorother scents the air  
And the soft Goeasy's grow?

It lies in the valley of Whatstheuse,  
In the province of Letherslide;  
That tired feeling is native there—  
It's the home of the listless I don't care,  
Where the Putitoffs abide.

The Putitoffs never make up their minds,  
Intending to do it tomorrow;  
And so they delay from day to day  
Till business dwindles and profits decay  
And their days are full of sorrow.

No man can live happily who regards himself alone, who turns everything to his own advantage. Thou must live for another if thou wishest to live for thyself.—Seneca.

Then to side with truth is noble when we share her wretched crust,  
Ere her cause brings fame and profit and 'tis prosperous to be just.  
—James Russell Lowell.

Some folks never pray for rain until their cisterns go dry, and then they just cuss the drouth.

Dyed beard or hair always looks dead enough, and it never deceives anyone but the owner.



## Save the Harnesses From Winter's Dampness

By The Oil Philosopher.

You may buy the best harness on the market and ruin it almost as quickly as a cheap one if you do not protect it from dampness and other destructive elements.

You can keep the pores of a leather harness closed against the attacks of moisture, heat, sweat and dust by applying—

## Duck-Back Harness Oil

This natural harness oil keeps your harnesses black, soft and pliable—just as they appeared when they came from the shop.

Duck-Back Harness Oil preserves the life and color of the leather, saves repairs and makes the harness last longer.

Ask your dealer for a can of Duck-Back Harness Oil. If you should find him out of stock write the Utah Oil Refining Company, Salt Lake City, and it will see that you are supplied.

#### QUESTIONABLE METHODS

The city youth secured a job with Farmer Jones. The morning after his arrival promptly at 4 o'clock, the farmer rapped on his door and told him to get up. The youth protested. "What for?" he asked, rubbing his eyes.

"Why, we're going to cut oats," replied the farmer.

"Are they wild oats," queried the youth, "that you've got to sneak up on 'em in the dark?"—Circle and Success.



## Field and Farm

### AGRICULTURE CO-OPERATION.

Millard R. Meyers.

Part of address given before the Marketing and Farm Credits Conference. He said all had been more or less successfully when they failed it had been due to lack of money, lack of proper ideals and leadership or lack of economic necessity. He said in part:

"The Grange Store Movement failed because the farmer were poor business men and could not effect the saving which they expected to make. The Grange still exists, but has not an economic force. The Grange halls, once devoted to a study of economics, are now club rooms and their purpose and intention is ethic more than economic.

"The Alliance lost itself in politics.

"The American Society of Equity started on the theory that the law of supply and demand could be controlled by the farmers. They achieved more or less success in their effort to control the price of beans, peanuts and tobacco. Their effort to control wheat and cotton was a failure. At one time they claimed a membership of 100,000 farmers who were holding their wheat for \$1 a bushel. The crop never went to \$1 a bushel because the demand was not enough to put it there, and the theory of overcoming the law of supply and demand failed, as it always must.

"Following this failure, the leaders fell to fighting among themselves, slander suits were instituted and the promising society temporarily went to pieces. A few leaders proceeded, and today the outgrowth of these early beginnings is felt in North Dakota, Wisconsin and Kentucky, but the ideals have changed. They are merchandising grain, live stock and other products in keeping with their efforts.

"The Farmers' Elevator Movement was based upon a fight to gain three to ten cents a bushel more for grain at loading stations. The leaders did not know anything about true co-operation, as was the case of most other societies started ten years ago in this country. They simply called the farmers together, told them they were being robbed and got them to build their own warehouses.

"Three thousand warehouses are now owned by farmers. Each society is a law unto itself; some of them cooperative, many of them not. They were instituted to make a market and filled the purpose of the hour without a knowledge of co-operation.

"The California Fruit Growers have been organized in much the same way and have made their own laws and been controlled by wise leadership. They are marketing most of the fruit of the west and are worthy of imitation.

"The future of all societies endeavoring to serve the producer, in my opinion, will depend upon the application of the cooperative principle.

"The co-operative principle tends to make everybody a shareholder, to keep down the profits and to pay the highest market price for the produce. Expressed in ultimates, a corporation tends to monopoly and co-operation to democracy. A corporation enhances private profits to the highest degree, co-operation eliminates private profit

and renders service at the cost of service.

"The principle that has gone the farthest and done most good, and demonstrated beyond the question of a doubt its ability to compete with big business and to perpetuate itself from generation to generation is the Rochdale plan. This plan is a very simple. Any child can understand it, and a "wayfaring though a fool" can apply it. Simply stated, it provides first every possible customer may become a shareholder. Second, each shareholder shall have one vote. Third, interest should be paid on money invested. Fourth, the remaining surplus shall be divided on the basis of patronage. Commonly stated, interest on money and dividends on trade.

"American co-operation must be based on limited liability, inasmuch as our American communities are not willing to risk their entire fortunes for the good of the community.

"The co-operative system has many advantages. It is democratic to begin with. It is free from state aid or political control or interference. It allows the future action of the law of supply and demand. It standardizes farmers' products, it prevents waste, it avoids unnecessary handling, it increases production, it improves the grades of produce. It increases the net income to farmers and decreases the cost to the consumer. It allows the future working of the law of supply and demand. It encourages competition. It increases initiative and compels an agricultural leadership."

### QUESTIONS ABOUT OUR NEW TAX LAWS.

By Harden Bennion.

Three questions answered for one of our subscribers about the new tax law.

No. 1. "What per cent of actual value should be taken by the assessor on personal property?" I have to say that the law knows only one per cent, and that 100 and it should be applied to all property, real, personal and mixed. In the past, as everybody knows, that standard has not been used or taken as to any class of property, and of course under such circumstances the only thing that could equitably be done is to apply the same percent of valuation, or take for assessment valuation, the same per cent of personal property as is taken of real property. We believe that in a general way that rule has been applied by the assessors of the state of Utah, although there is no doubt that in individual cases there is reason for complaint.

Both the constitution of statutes of Utah have always required this assessment of property at full value, but for various reasons, too numerous and lengthy to enumerate here, we have always assessed property at much less than actual value. Many abuses and inequities have gradually crept into our taxation system as a result of this practice of under assessment, and with the object of correcting them the last legislature so limited the rates or levies that might be fixed by the various taxing authorities that if the business of state, city, country, and schools shall be taken care of in

the future, full valuation will be absolutely necessary.

There is quite a wide divergence of opinion as to what the result of this legislation will be, it being the opinion of many taxpayers that their taxes will be very greatly increased, while on the other hand many of the officials charged with the responsibility of administering the affairs of cities, counties and schools, and especially the school teachers, fear that the rates have been limited to such an extent that it will not be possible to raise the funds absolutely and imperatively necessary for the carrying on of these public functions. Personally I am of the opinion that neither extreme will be reached. It is undoubtedly true that some citizens or corporations will be required to pay higher taxes in the future than they have done in the past, and it is undoubtedly true that as a matter of equity they ought to do so; while on the other hand I believe that the taxes of some citizens or corporations will be less than they have been in the past. It may also be possible that some school districts or other civil divisions of our state will have their rates of taxation so reduced that where they have heretofore had a surplus of funds they will now be cut down to their actual necessities which all will grant is a "consumation devoutly to be wished." And it may be possible that in some instances real hardship will be worked by cutting down to a less figure than is absolutely necessary the funds required for public uses. It is scarcely possible that such an innovation as this can be accomplished without working some hardship; but certainly all officials charged with the responsibility of taking care of these public matters will do all in their power to do so and to meet an exigency that may arise.

No. 2. "Does the county use the same valuation, or is that the valuation assessed on the tax receipt?"

I am not exactly sure as to the meaning of the question, but I take it that your correspondent wants to know as to whether or not the same valuation that is fixed for other taxation governs in the matter of county taxes. If that is his meaning I answer yes. All property located entirely within one county, other than mines and mining claims, is assessed by the county assessor and his valuation, subject to review by the county and state boards of equalization, is the basis for all taxes on that particular property. All property that extends into two or more counties, also mines and mining claims, is assessed by the State Board of Equalization, and the value fixed by the Board governs as to state, county, school, and city taxes assessed on that property.

No. 3. "What per cent should be deducted from the value of machinery from year to year?"

I submit that this is a very difficult question to answer. One piece of machinery may not last a full year at least may be so used that it will very naturally be very soon worn out and discarded while another piece may be so used that it may last a generation. I can only say that these conditions must be taken into consideration and an assessor must govern himself accordingly. However, the State Board of Equalization has taken this general position; knowing that it is practically an impossibility for it to determine the exact condition as to wear and

## Try This Marmalade Recipe —Simple—Delicious

Marmalade and toast for breakfast is a diet that has been famous for ages. The appetizing zest of this delicacy will be appreciated by all. Try this recipe:

Slice six medium size oranges and one lemon very fine, cutting through skin and pulp; use all pulp—first removing seeds; after fruit has been sliced, add three pints of water to each pint of fruit; let this stand 24 hours, then boil until skins are very tender; allow this to stand 24 hours, then to each pound of fruit add one pound of Utah-Idaho Sugar; boil until it jells. When finished the marmalade should be a light amber color.



tear on machinery its present value and state of deterioration, etc., we have considered that machinery was worth what it cost installed, just as a house is considered to be worth what it cost to build, so long as it is doing the work for which it was installed. And of course as soon as it could not be used to do that work, or could not be taken for any other useful purpose, then it is assessed not at all or practically not assessed.

In conclusion I want to say that in so far as this matter is in our hands we have no other desire than to make as equitable as possible the burden of taxation. We do not want to increase or make it heavier. The officials who have the disbursement of the public funds are the men to whom the people must look for relief if they feel that this burden is greater than they ought to carry, although of course if there is inequity as between classes of property or as between counties then the responsibility is ours and we welcome investigation and will do all in our power to correct the evils complained of.

Very respectfully,

HARDEN BENNION.

Secretary State Board of Equalization.

Wit makes its own welcome and levels all distinctions. No dignity, no learning, no force of character can make any stand against good wit. It is like ice, on which no beauty of form, no majesty of carriage, can plead any immunity, they must walk gingerly, according to the laws of ice, or down they must go, dignity and all. —Emerson.

Poverty is the north wind that lashes men into vikings.—Quida.



## POULTRY

### A REAL EGG FARM.

By Edwin Bricket.

My purpose in this article is to describe to you one of the world's greatest egg farms. To show you what a man in New Jersey can do, and let you compare your conditions with his. Then I leave the question with you. Can a man in Utah do as well or can he not? Or could he do better? For the present this question is left open to you for your thought and consideration. I want to let you know what the world is doing in a great way and to try and enthrall my Utah friends and fellow breeders to do the same.

The writer, not long ago visited this celebrated egg farm, about to be described, and had a long talk with the proprietors and managers about their poultry business. "From our second year in business," said the owner, "we have been compelled, if we were even to take care of a portion of the ever-increasing business offered us, to add each season to the buildings and equipment of the farm. The matter has been a great problem, for the business in the last two years has reached a point where we plainly saw it was not going to be possible for us to continue to care for it without bringing in other interests.

"After careful deliberation, we decided to once more increase even the present capacity of the farm, and hereafter we shall carry over 10,000 laying hens, and have between 1500 and 2000 breeding cockerels for sale. In this connection you must realize notwithstanding the fact that we largely increased our breeding facilities last season, and sold more hatching eggs than ever before, we still were compelled to decline orders for over 100,000 eggs, but with the increased possibilities to be installed the coming season, we will enjoy the profit which last season we were compelled to forego."

This egg farm, or rather their system of care and housing of their birds is unique.

It was said by the so-called experts on poultry raising who visited this plant very early in its history that it was a short-lived proposition, that the principles employed there in feeding and housing the stock, were unsafe and the vitality of the stock would soon cave under such treatment. All the time the managers of this plant were making extra ordinary claims as to being able to conserve and enhance the vigor and stamina of their stock from year to year. Time has proven that these gentlemen knew best, and today their stock shows no deterioration, on the other hand it shows exceptional health and vigor and increased productiveness.

The pullets never touch the ground again after being taken off the range and placed in laying quarters. This as the principle innovation and unique feature of the way to which I have referred in this article.

Experts said this method of housing would end in positive failure, that it would be impossible to keep up the strength of the flock, but in spite of such contrary predictions the originators of the idea have succeeded beyond what they themselves thought might be possible.

The egg production of our pullets, they say, has been increasing steadily, year by year, until now in flocks of 1500 they show an average of 146.23 in the first ten months of their pullet year. Their stock has been line bred in the true sense, never in-bred; and as a result, daughters can be relied upon to equal and surpass the laying records of their mothers.

Not only in this country, but in foreign lands as well, the males of this great strain are found heading flocks for the purpose of improving their egg production. The reports from these flocks prove how surely these males beget daughters which for surpass the laying records of their mothers.

This farm breeds a large utility bird. Standard qualifications are always borne in mind and adhered to in so far as they do not sacrifice any of the qualities essential for great egg production and money getting.

From the inception of this egg farm it has been the policy to increase the facilities for housing and incubation with the growth of the business year by year and it is interesting to glance back at this time to the year 1906, and realize the farm started with one incubator having a capacity of 390 eggs, three small out door colony brooders, and a breeding pen of most carefully selected birds, consisting of 30 hens and three males.

From this foundation this unsurpassed strain of White Leghorns, with its marvelous egg production has been developed.

The farm has grown until today on the incubator side, the hot water incubators designed and built by the owners carry 20,000 eggs at one setting.

The brooder house with its capacity of 12,000 chicks all under one roof, has not its equal in the world.

The last two seasons, the demand for breeding birds and hatching eggs fairly swamped the farm.

During the hatching season of 1913 orders for more than 75,000 eggs were declined and this in spite of the fact that the increase of breeding birds had been made possible by additional housing and a larger flock of quality birds to select from.

The farm realizing each season that it was facing an ever increasing ratio of orders beyond its capacity to fill, in 1914 again increased the hatching egg end of the business only to find itself unable to meet demands of its patrons by over 100,000 eggs.

This is far too serious a condition to allow to continue, taken with the fact that the farm received today a higher price for a utility egg than any plant in existence. The minimum price by the thousand being ten cents apiece, therefore, on this one item alone, taken at the lowest price paid, the farm in receipts lost last year \$10,000.

It has therefore been definitely decided to double the breeding capacity in order to take care of this most profitable side of an egg plant. This will be done by the addition of two more breeding houses, each 200 feet long, bringing the farm to ac-

(Continued on page 15)

## The Perfection of Union Pacific System Service



Is not a chance—it is the result of the expenditure of millions of dollars in money and the working-out of a positive plan of betterments, which have extended over a period of many years—

As a consequence, the Union Pacific System has been brought to a state of operating regularity—the effects of which are felt through every channel of the service; the work goes on from day to day, and the public is assured of the full benefits resulting therefrom—

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took all but one second. I have want-  
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320 acres, finest place in Sanpete  
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hogs, implements and crop goes with place.  
One mile to first class town on R. R., sure  
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860 acres improved stock ranch in  
Wyoming, lot of cattle, horses, over 200  
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place; independent water right, fine free  
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farm on edge of Lehi City Limits.  
360 apple trees. Prunes, currants,  
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were not satisfactory, so I began to  
experiment and after a number of  
years, I found the secret. It costs  
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their mothers, that it is an advertise-  
ment for the farm, which lives and  
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From the bare ground the farm has  
grew until there are in 53 build-  
ings, 27,300 square feet of floor space.  
These buildings are of the very best.  
The usual cheap constructed poultry  
houses do not exist on the farm. The  
lumber was bought in car load lots,  
the plans and drafting done by the  
owners labor hired and the construc-  
tion superintend by themselves. This  
style house was a revelation. Its  
labor saving possibilities under one  
roof, has much to command it in the  
poultry public.

FOOD SUPPLY OF THE  
FARM HOME.

Much public interest has been ex-  
cited by the recent announcement of  
United States Public Health Service,  
to the effect that the development of  
the disease known as pellagra in  
human beings depends on faulty diet.  
Among the suggestions of the Public  
Health Service for the modification of  
diet to prevent the development of pel-  
lagra are a number of items which  
emphasize the importance of the  
campaign of the department and the  
State Agricultural Colleges to in-  
crease the production of food sup-  
plies on the farm, especially to bring  
about a home supply of meat, eggs,  
milk, and butter.

Among other specific recommend-  
ations of the Public Health Service  
are—

- (a) The ownership of a milk cow;  
an increase of milk production for  
home consumption.
- (b) Poultry and egg raising for  
home consumption.
- (c) Stock raising.
- (d) Diversification and cultivation  
of food crops.

These four specifications give an  
added argument for the campaign of  
live-stock raising and farm diversifi-  
cation, which has been especially urg-  
ed, particularly for the South. It is  
quite reasonable to presume, there-  
fore, that the production of the family  
meat supply at the farm home will  
not only decrease considerably the  
expense of the family table and add  
somewhat directly to family revenue  
as well, but will have a profound ef-  
fect on the health and well-being of  
the members of the family.

The Grand Theatre

SUNDAY NIGHT ONLY

VAUDEVILLE SHOW  
ALL FEATURE ACTS

THE BIGGEST VALUE IN  
SALT LAKE CITY FOR  
10 AND 20 CENTS.

121 East 2nd South  
SALT LAKE CITY, UTAH.

A REAL EGG FARM.

(Continued from page 14)

cept orders which will so largely in-  
crease the profits from that side of  
the business alone.

The increased demand for founda-  
tion stock for breeding purposes  
has kept pace with the demand for  
hatching eggs, and it is the purpose  
of the farm, by the additions that  
will be made, to place itself in a  
position to sell each year a much  
larger number of breeding males and  
females than it has ever been able to  
do before.

On the breeding cockerel side of  
the business the farm has never  
touched one half of the orders which  
have come to it.

The reason for this is not for to  
seek. The birds sold by this great  
egg farm cannot be duplicated any-  
where, and the result in flocks where  
males from this strain are used to  
head breeding pens, is so marked in  
the ability of the resulting daughters  
to surpass the laying qualities of



A FEW POINTS CONCERNING  
CREDITS MOVEMENT

the American farmer has three different purposes: first, the purchase of land; second, the construction of permanent improvements, such as buildings, drainage ditches and fences; and third, for the general operation of his farm, which calls for payments for labor, implements, live stock, and fertilizers. For the first and second of these purposes he needs long-term or mortgage credit, and for the third he needs short-term or personal credit. It is the lack of adequate long-term credit facilities which is most keenly felt, and the development of a system of such credit facilities is now receiving most attention. At present there are six principal agencies for long-term or mortgage credits; namely, banks, individual money lenders, mortgage companies, life insurance companies, certain building and loan associations, and a few States. Rural credit institutions have thus appeared in great variety, but there is a conspicuous lack of system, correlation, and co-operation among them. In spite of the lack of credit our farmers have managed in some way or other to borrow to the extent of six billions of dollars. On this amount they are paying interest at the average rate of eight and a half per cent—a rate much higher than is warranted by the character of the securities that they offer—and this is a serious handicap.

To meet the needs of our farming population for better credit facilities, two diametrically opposed plans have been proposed in Congress: (1) the establishment of land mortgage banks

whose capital shall be obtained from private sources; and (2) direct loans to the farmers by the Federal government. These differing schemes were embodied in a number of bills of varying merit, none of which were acted upon favorably. The weight of opinion among students of the problem now seems to be that whatever measures are eventually enacted should embody the following features: (1) provision for mortgage loans to run for a period of at least twenty years; (2) interest rates on these loans as low as is consistent with the risk involved and with the rates on other loans equally well secured; (3) some method of making the mortgage securities as readily negotiable as the bonds of a municipality or other governmental agency; (4) provision for wiping out the principal of the debt by means of annual payments by the borrower slightly in excess of the stipulated rate of interest.—Wm. O. Scroogs, Professor of Economics and Sociology L. S. U.

## ONLY A "DAD."

Only a "Dad," with a tired face,  
Coming home from a daily race,  
Bringing little of gold or fame,  
To show how well he has "played the game,"

But glad in his heart that his own  
rejoice  
To see him come, and to hear his  
voice.

Only a "Dad," for a brood of four,  
One of 10 million men or more,  
Plodding along in the daily strife,  
Bearing the whips and scorns of life,  
With never a whimper of pain or  
hate.

## TWO FARMS FOR SALE

## At Very Reasonable Prices

First one consists of 160 acres, all well fenced, as well as division fences. 40 acres in pasture land. 80 acres, plowed ready for spring seeding. 40 acres, already seeded with fall grain. Water right—one-half interest in a small creek.

In the other there are two hundred acres, all fenced, good brick house. Practically all seeded in alfalfa. Some of it, one two and three years standing. Individual water right. Plenty of water.

## Write or Call

707 Kearns Building  
Salt Lake City, Utah

For the sake of those who at home  
await.

Only a "Dad," neither rich nor proud,  
Merely one of the surging crowd,  
Tolling, striving, from day to day,  
Facing whatever may come his way;  
Silent, whenever the harsh condemn,  
And bearing it all for the love of  
them.

Only a "Dad," but he gives his all  
To smooth the way for his children  
small

Doing, with courage stern and grim,  
The deeds that his father did for  
him.

This is the line that for him I pen,  
Only a "Dad," but the best of men.  
—Audrey Thatcher.

## Ask Me About Salt Lake County

I am representative for the Inter-Mountain Rural Credit Association for Salt Lake County. Will gladly call on you to explain any details. Write or telephone me and I will come and see you.

P. T. MOYES.

465 South 3rd East, Salt Lake City, Utah. Phone Was. 7370-W

# Do You Want Some Six Percent Money

## On 5 to 35 years time, with no worry of foreclosure

### HOW WE WILL BE ABLE TO LOAN 6 PERCENT MONEY

Each share of stock is sold for \$100.00. Of this amount \$50 is placed in the Surplus, or Working Fund, and \$50 in the Capital Stock, or Guarantee Fund.

The Surplus is loaned to the members at 6 per cent interest per annum on first mortgages.

These mortgages are not sold, but they are placed in trust and bonds equal to their face value, bearing 5 per cent interest and secured by them, are issued and sold.

The money received from the sale of the bonds is then loaned at 6 per cent interest on first mortgages, which are also placed in trust, and bonds of equal value, bearing 5 per cent interest, are issued and sold.

This process is repeated until the Association has outstanding bonds equal to fifteen times the amount of its Capital and Surplus.

In addition to having the bonds secured by an equal amount in mortgages, the Guarantee Fund is pledged as further security for the bonds of the Association.

The bonds of the Association, thus secured, will be one of the highest class bonds issued in the United States, and will enable the Association to loan money for its members at the lowest possible

### SEVEN AND THREE-TENTHS PERCENT

a year will pay a loan from us, both interest and principal in 35 years, without commissions, renewal charges, or other expense, and you may pay off your entire loan any time after five years.

Under the present conditions you are paying 9 per cent; or \$90 a year for interest alone, and at the end of the period for which it was loaned you still owe the principal of \$1000. Under our plan \$73 a year will pay off a loan from us of \$1000, both interest and principal at the end of the time.

This is a Co-operative Association, therefore, you must necessarily become a shareholder in order to enjoy the advantages it has to offer. Clip out, fill in and mail the coupon today. The sooner you join the Association, the sooner you will get your loan.

THE INTER-MOUNTAIN RURAL CREDIT ASSOCIATION  
SALT LAKE CITY, UTAH.

Without obligating me in any way please send me your sixteen-page booklet which explains in detail the plan of The Inter-Mountain Rural Credit Association and tells how I can become a member and enjoy the benefits of this co-operative organization of Utah and Idaho.

Name.....

Address.....

**The Inter-Mountain Rural Credit Association**  
6 MCINTYRE BUILDING. SALT LAKE CITY, UTAH.



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Ag. sec.

# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region

OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE

VOLUME XII; No. 23

LEHI AND SALT LAKE CITY, UTAH

JANUARY 8, 1916



BEANS ARE A PROFITABLE CROP ON MANY FARMS.

## READ THESE ARTICLES IN THIS ISSUE.

The New Irrigation Practice.—How to Reduce the Cost of Production on Fruit Farms.—  
Shall we Keep Cats on the Farm?—Two Good Combinations with Poultry.—The Farm  
Kitchen and Bread Making.—Indoor Window Box.—How to Store Ice.—The Silo in  
Dairying.—Cow Testing.



**H**OW ONE MAN SAVED \$23.00 BY READING AN ARTICLE IN OUR WEEK-ly farm paper about the diseases of fruit trees. He had just bought some and from information given was able to tell that the trees he received were diseased. He sent them back and received his \$23.00 amount of the purchase.

The Utah Farmer has been doing some thinking for you, some planning, trying to work out some way to help you.

We have been urging better farm methods and better homes.

We can serve you by answering your questions, don't be afraid to send them into us.

We are going to help make 1916 the greatest agricultural year this country has ever experienced.

What is the hardest problem on your farms? The most difficult thing to overcome. You just send your questions to us and an expert, a well known authority will answer you.

This service is free to our subscribers.

See how that fruit man made twenty three dollars by being a Reader.

It costs only one dollar for 52 issues.

Our help has saved others, small amounts up to \$5 or \$10 or even \$500.00 when a valuable horse was saved because of the advice given by us.

What about the crops on your farm?

What rotations best fit your farm?

What are the cheapest feeds to produce meat or milk?

What crop can you plant on alkali land?

What is the value of drainage to your lands?

Where can I find a buyer for my hogs or cattle?

How can we organize a farmer co-operative society?

Where can I get a book, a simple method of taking an inventory?

What about the problems in your home?

Do you want a recipe for cooking any particular thing?

These and many other questions we will be glad to answer.

Every week, each issue, we are having special articles about some of these questions.

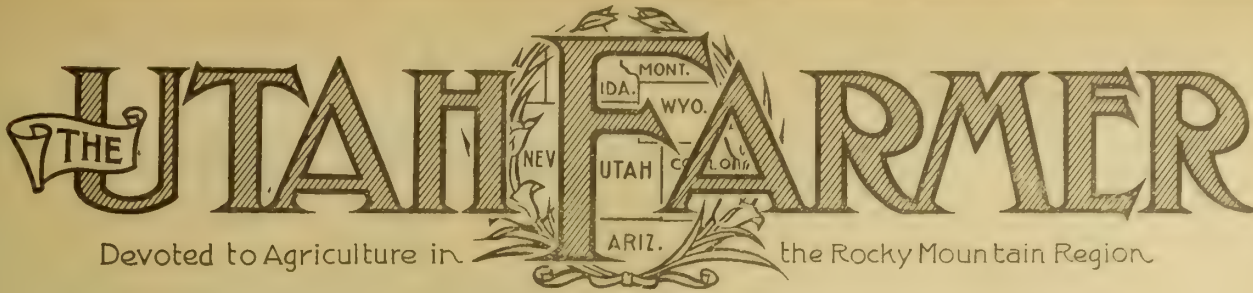
The Utah Farmer comes to you for 52 times a year and cost only a dollar. Right now is the time to send your renewal and send your neighbor's with it. It will be the biggest dollar's worth you can purchase. Send today to the Utah Farmer, Lehi, Utah.



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VOLUME XII.

LEHI, UTAH, SATURDAY, JANUARY 8, 1916

No. 22

# The New Irrigation Practice

By Frank S. Harris, Agronomist, Utah Experiment Station.

Utah was a pioneer in the art of irrigation on the American continent. Her farmers should, therefore, be among the first to adopt the most advanced methods of using irrigation water. During the last generation much has been done to place irrigation practice on a rational basis, and if the water users of Utah are to maintain their lead, they must be alert to the discoveries that are constantly being made. In some of the other states where water is scarce and land high in price wonderful skill in the use of water has been developed.

In the early days the settlers devoted themselves largely to getting water out on to the land. They were not so much concerned about the efficient use of water as about getting it out in any way possible in order to save themselves from starving. As time passed, the idea of rights began to develop and there was a scramble to hold as much water as possible. Farmers used all they could get in order to retain possession.

Now that the most available water has been appropriated, it is apparent that there is in most places more land than water and that the fullest development of the irrigated section will necessitate a wise, and not a wasteful, use of irrigation water.

## Increasing the Irrigated Area.

It is estimated that when the "new irrigation practice" is thoroughly established in Utah at least four times as much land can be served by the available water as at present. This will mean a tremendous addition to the wealth of the State. The change will not be brought about all at once, but will require years for its completion. It will be necessary to combine all possible methods of saving water. Among the means that will work to this end are: (1) The storage of flood waters now going to waste during certain seasons of the year. (2) The prevention of seepage losses from canals and ditches. (3) A study of the special needs of each crop and application of water to suit these needs. (4) The use of less water on each crop, and (5) Diversification of crops in such a way that the available water can be used economically throughout the entire irrigation season.

## Storing the Flood Waters.

Every observant person has been struck with the great waste in water occurring every winter and spring when the rivers are filled to their

brims with water flowing to waste where it will never be used. When one sees these great streams running by he cannot help thinking what this water would do in the late summer when sugar beets, alfalfa, potatoes, and grain would be so much benefited by it.

In the Great Basin, the main part of the annual precipitation comes during the fall, winter and spring months when no water is used for irrigation. As a consequence the streams are highest at this time and most of the water goes to waste. In some streams, the drainage area of which is large and at considerable elevation, most of the water is held back as snow till fairly late in the summer; but in some drainage areas the streams go dry about the time irrigation water is most needed.

The conservation of this early flood water is one of the chief problems of western agriculture. This conservation can be effected in a number of ways. One of the most important of these is the construction of reservoirs like those along the Sevier river. These reservoirs hold back thousands of acre-feet of water that would otherwise go to waste in Sevier Lake during the spring and make it available to the farmers of Garfield, Piute, Sevier, Sanpete, Juab, and Millard counties, during the summer when crops would be drying up. Other systems like these will have to be built in various parts of the State.

Reservoir sites are not always available and other methods of storage have to be resorted to. One is the storing of the water in the soil itself. A good soil ten or twelve feet deep, under favorable conditions, will hold sufficient water to mature a crop without any more being added. Flood water can be soaked into a soil of this kind during the fall and early spring and here stored till needed by crops. This method of storage has great possibilities but has not as yet been used as widely as it will be in the future.

## Preventing Seepage Losses.

Experiments have shown that about half the water entering the intakes of canals is lost before it reaches the land. This loss is due largely to seepage through the canal. The water lost in this way not only is wasted but it does positive injury by water-logging low lands and causing alkali to accumulate.

The remedy for seepage lies in giving more attention to canal beds and also in stopping the leaky places.

Some of the leaks cannot be stopped without lining the canal or fluming over the worst places while others can be remedied by puddling the sides and bottom of the canal. The growth of brush and weeds in the ditch adds greatly to seepage losses. Certainly no very high efficiency can be claimed for an irrigation system until the seepage losses are reduced much below the present average.

## Irrigation According to Needs of Crop.

Too much irrigating has been done in the past without taking into account the needs of the various crops. Each crop has its own peculiar needs in relation to water, and an attempt to irrigate all crops in the same way is as unwise as to force all kinds of stock to consume the same diet. Some crops need water most during early stages when they are getting a start while others require most of their water later in their growth. The understanding of these principles will do as much as anything else to usher in the "new irrigation practice."

## Less Water Used More Wisely.

Repeated observation has demonstrated that where plenty of water is available farmers use more than they should to get the best results. They want to make water the "cure all" for every ill and whenever the crop doesn't look just right they drench it with water. This often results in a decreased yield besides wasting the water. Surely the wise plan is to use water as economically but as intelligently as possible.

## Greater Diversity of Crops.

The more diverse the cropping system, the more effectively can irrigation water be used throughout the season. If but one crop is raised the water is probably used to best advantage only for a short time, while if many well selected crops are raised the water is being used effectively all through the season. As new and more diverse crops are brought to the irrigated farms, irrigation practice will gradually become more rational.

## Needs of the Future.

The increase in population of the irrigated sections of the country makes imperative a new irrigation practice founded on a wider use of the available water. The wasteful methods of the past can no longer be tolerated. Already in some sections a very effective use is made of all irrigation water. This same effectiveness will have to be extended to the other irrigated districts where land is

plentiful and water scarce. No one method of saving water will be sufficient, but every resource of science and art will have to be employed. Since Utah was a pioneer in introducing irrigation, why should she not lead in irrigation reforms?

## WEEDS SHOULD BE DESTROYED

The way to emphasize the loss that is caused by weeds is to keep saying something about them.

They use plant food that the crops should have. Where the available plant food is limited, if weeds are allowed to grow, they take nourishment from crops.

Weeds rob crops of moisture. In dry seasons when the plants are struggling to maintain growth and hold their cells in contact, weeds may greatly reduce the yield of crops.

Weeds shade other plants, and if allowed to have room may crowd out the cultivated plants or shade them so they will not thrive.

Weeds sometimes harbor fungi. The club-root of the cabbage occurs on mustard and other allied plants. Also pepper grass. Rust may be found on squirrel-tail grass.

The quality of certain farm products may be reduced materially by weeds. As an example we have but to mention kinghead in wheat. This is not removed by the process of milling and consequently the grade of wheat is lowered by it. The same is true with cockle, garlic, etc.

Some weeds are injurious to animals, such as garlic, Spanish needles and some of the poisonous plants.

During this season the good farmer looks to the repair of the farm buildings, the careful housing of all implements needed no more until next season, and the provision of additional quarters and shelter for the increase in live stock.

"De man dat reserves mos' of his piety foh Sunday," said Uncle Eben, "can't blame de small boy for showin' of mos' of his goodness de week befo' Christmas."—Washington Star.

While Thanksgiving has its foundation on Plymouth Rock, Christmas rests upon the Rock of Ages.—Charles Dudley Warner.

Have you noticed that when the weather just exactly suits some folks they are sure that it will not last long?



## DAIRYING

### THE SILO IN DAIRYING

It might seem a broad statement for one to say that the silo has meant as much to the dairy industry as did the binder to that of grain raising; yet I firmly believe such is the case.

One class of farmers object to the cost of the silo, but in doing this they fail to consider the permanency of a really good, substantial silo, which reduces the ultimate cost of the building very materially. Of course, it must be kept painted (which can be done at small cost) to insure lasting qualities, the same as other buildings.

Besides to scatter this theory, I know, personally, of many farmers who are deeply in debt for automobiles (often mortgaging their farms in order to buy the machines), and a silo is easier to buy on credit than an automobile, any day. Not only is its first cost much less than an auto, but the cost of upkeep on a silo is a mere nothing compared to that of the automobile.

I have heard others object to the silo on the ground that the feed is unfit for stock to eat. While watching one of my neighbors feed his stock silage one evening, I asked him how they liked it. He replied that they simply fought over it. He was feeding in feed bunks or large, wide troughs, and the cattle licked the silage up as clean as it could have been swept up.

Of course the corn undergoes a sort of fermentation after being confined in the silo. This article must, of necessity, be too brief to discuss this point thoroughly, but anyone who wants to go into the matter will find that any kind of feed the cow eats is not especially attractive to the taste or scent of man. By chewing the inside or pulpy part of some corn fodder one will catch my point. There no longer is any question in the mind of the intelligent feeder but that silage is as nearly an ideal dairy feed as ever has been devised by the artifices of man. Its bulk of tender, succulent stalks and blades, the rich juice from them, and the goodly per cent of rich, nourishing grain, all combine to make it the greatest feed ever given dairy cows, of course, best results will be realized by feeding with it a limited quantity of good, clean clover or alfalfa hay.

It is an undisputed fact of course that the silage in some silos freezes,

thus making it a little unhandy to feed, and perhaps causing a small loss of feed when it thaws out in the spring, but show me any feed of which this is not true in some form or other. Take fodder, for example. One thing sure, silage always is in a dry place to get at and feed, and by being watchful, there need be but very little if any of it lost at the spring thaw-out. Besides, I believe some manufacturers are claiming a frost-proof silo, and this will mark another innovation in favor of the silo.

Many farmers are holding aloof from the silo because of the expense attached to filling one. This easily is overcome through co-operation. Every farmer need not own a silage cutter. Several farmers in the neighborhood can club together and buy the engine and cutter each taking his turn in using it. Here in our neighborhood some man who operates a threshing machine outfit also buys a silage cutter, and makes the neighborhood the same as in threshing grain. This plan works nicely, the farmers also exchanging work with team and man in hauling in the corn to the cutter.

Let every farmer set his mind at rest regarding the quality of silage as a feed—there is no question but that it is the ideal ration for dairying.

He also may consider that the cost of storage is but slightly (if any) more with silage than other feeds, and that there are decided advantages gained in feeding out the silage.

Next, then, will come the question as to how much really nourishing feed it contains, and a comparison with other feeds will show this. Let the reader estimate, approximately, how much it will require of other rations—hay, fodder, etc., then consider the following facts:

A silo 14 feet in diameter and 24 feet high will hold about 70 tons of silage. This will feed 20 cows (40 pounds of silage per day) for a period of six months. It will require about seven acres of corn to fill a silo of the above capacity. How many cows will your seven acres of corn sustain if the product is handled as fodder or stalk fed? Its convenient form for feeding makes it easy for the dairyman to give uniform rations by weight. There is practically no waste, the cows consuming every atom of it.—Jersey Bulletin.

### COW TESTING.

The "boarder" cows must go. To keep them means a loss

The modern dairymen realize that they must cull out the cows which are not worth milking. One man commenting on this subject said his animals were in his herd for a purpose, and if they did not fulfill their mission there was one of two things wrong; it was either his methods or his cows. He believed a cow tester in the valley would be a means of helping correct faulty methods and of locating the unprofitable cows. One of the main purposes of the cow-testing association is to enable the dairymen to have a tester to keep the records, which in practice it is almost impossible for the farmer to keep. The tester will arrive at the farm in time for the afternoon milking, weigh the milk given by each cow in the

## Beaverhead Valley

MONTANA

### Offers Wonderful Opportunities to Utah Farmers

Read the following which was printed in the Anaconda Standard, December 11, 1915. It is the Ranch we are now subdividing and selling.

### Montana Oats Sell at High Record Price

One of the largest sales of oats ever made in Montana was announced yesterday when the Beaverhead Ranch company of Dillon, one of the Penwell companies, sold to the Gould Grain company of Minneapolis 3,000,000 pounds of oats at \$1.15 per hundred. The total consideration was \$34,500.

These 1,500 tons of oats loaded in 50 cars will make two train-loads and will be sent East as fast as they can be loaded.

This is one more evidence of the fast-increasing prominence of Montana as a grain-producing state and the price received shows what enormous profits the farmers of Montana are making this year.

Get busy and see this property! Here is the country where you can make some money.

### Sold On Long Terms, Easy Payments

Railroad station, school house, telephone line on property. Butte city affords highest priced market in the West.

Unquestionably the best opportunity for home-seekers now being offered.

For photographs and full information see

## Beaverhead Land Co.

516 Vermont Bldg.  
Salt Lake City, Utah.

A gain of \$2,608,397 in deposits in four years.

Here is the record:

December 30, 1911	\$2,946,503
December 31, 1912	4,229,541
December 31, 1913	4,489,903
December 31, 1914	4,562,420
December 29, 1915	5,554,900

For the reason, ask our customers.

**Walker Brothers**  
Bankers

SALT LAKE CITY



herd, and take a sample of it to test for butter-fat. The following morning the individual production of the herd will be weighed again. Later the Babcock test is used to determine the percentage of butter-fat in each cow's milk. From these figures the tester estimates the amount of milk and butter-fat given in a month by each cow and sets against this the amount of feed consumed. These records he leaves with the dairy farmer. By studying these records it may be determined which cows are not paying and must be culled out.

### ICE HOUSES ADD TO DAIRY PROFITS.

No producer of milk or cream in regions where natural ice is obtainable, so easily as it is here should be without ice through the summer months.

500 pounds of ice annually will cool the cream from each animal in a 20-cow dairy. The same figures, doubtless, would apply to any place here though it would be well to allow a margin of even 200 or 300 pounds for shrinkage and for household use.

An ice house with a capacity of ten tons can be built for \$50. The harvesting and storing of ice can be done for less than \$1 a ton. On this basis sufficient ice to cool the cream from 20 cows and to supply the farmer, is amply justified.

**\$15<sup>95</sup> ON TRIAL**  
**Upward**  
**American**  
**FULLY GUARANTEED CREAM SEPARATOR**

A SOLID PROPOSITION to send new, well made, easy running, perfect skimming separator for \$15.95. Skims warm or cold milk; making heavy or light cream. Bowl is a sanitary marvel; easily cleaned.

**ABSOLUTELY ON APPROVAL**  
Different from picture, which illustrates our large capacity machines. Western orders filled from western points. Whether dairy is large or small write for handsome free catalog. Address: AMERICAN SEPARATOR CO. Box 4098 Bainbridge, N. Y.

**EAR PERFECT TAGS**  
Samples Free  
**ATTACHED INSTANTANEOUSLY**  
Name and Address. Numbered if Desired.  
LEG BANDS for Poultry, Pigeons, Turkeys  
SALT LAKE STAMP CO. Salt Lake, Utah.

needs of the farm home, would not cost to exceed \$15 a year, or one-half a cent a pound for the butter fat produced. As the quality of the cream delivered is coming more and more to determine the price, this slight expenditure on the part of any dairy farmer, is amply justified.



# What Place Should Fruit Growing Have On a Well Balanced Farm In Utah?

By E. D. Ball, Director of Utah Experiment Station.

## How to Reduce the Cost of Production

Many factors enter into the solution of this problem. How to reduce the cost of production. Among which the following are important, assuming of course in every case that the right soil, the right climate, the right varieties and the right man have been combined in the orchard under consideration—a large assumption under present conditions, but a necessary one, to success in orcharding.

Given these conditions then we have the following factors to consider: First, intercropping of the orchard to cultivated crops from the time of planting until profitable bearing. This will mean from 5 to 7 years, depending on the varieties and care. By this process it will be possible to reduce the growing cost materially, leaving little more than the "overhead" to increase the investment each year. By this method alone the cost of producing a box of apples may be reduced, according to these tables, ten percent or enough to give a working profit in itself.

In this connection the writer has tabulated the statement of costs of developing a 10-acre block of apples up to the end of the sixth year or to what is apparently a commercially productive orchard. During this time three other blocks had been planted and in the table presented the costs given are for the average of the four orchards as far as they have been developed, the last two years being of the single 10-acre block. These

averages have not materially differed, tending to increase a little as the cost of labor has risen.

This table is not presented with

the orchard in the way of cultivating and irrigating it. In this particular case all of this work has been done by day labor, which is the most ex-

Land	Over-head 1	Prun-ing 2	Handling		Yield	Returns	Total Hand-ling	Total Inven-tory
			Spray-ing 3	Thin-ning				
1st. Yr.	25	.60	80		38.60*		1.40	65
2nd. Yr.	31	.85	.20		.70**		1.75	33
3rd. Yr.	33	1.15	.50				1.65	35
4th. Yr.	36	2.45	.35				2.80	39
5th. Yr.	39	1.85	2.90	.45	28	13.00	2.20	44
6th. Yr.	44	1.55	3.45	2.35	134		7.35	51
Add buildings								8
Total cost per acre								525

1. 8% on inventory land and water tax depreciation.
2. Pruning and suckering.
3. Lice and codling moth.

\*Includes 10.00 tools and buildings, 18.25 trees, 5.00 planting, 5.35 extra preparation.

\*\*Replant.

the idea of being in any way comparable with the tables taken from Professor Lewis' bulletin, which are the averages of hundreds of examples, and should be quite representative of a large area in the Northwest. The figures are, however, the actual results of a typical orchard under about the average Utah conditions with regard to expense of production.

In this table it is assumed that the crop grown between the trees has paid all of the expense of the preparation of the land and of caring for

pensive form of handling, and yet the writer has been able to make the crop returns pay all these expenses to date.

In this table, instead of figuring the interest on investment at 6 per cent, as Professor Lewis has done, it has been computed at 8 per cent, which is what the writer has had to pay on money used. But even with this increase it has been possible to produce an orchard up to commercial bearing at an expense of \$525.00 per acre. This orchard then will enter the mature bearing period with an overhead expense at 6 per cent of \$31.00 for interest, as compared with \$56.00 for the northwestern orchard. This together with reduction in other overhead expenses, gives a 9-cent saving per box. Comparing the cost of spraying with that of the Northwest for similar production, you will see that there is another saving there, making a total saving on the items

(Continued on page 9)

## Ask Me About Salt Lake County

I am representative for the Inter-Mountain Rural Credit Association for Salt Lake County. Will gladly call on you to explain any details. Write or telephone me and I will come and see you.

P. T. MOYES.

465 South 3rd East, Salt Lake City, Utah. Phone Was. 7370-W

# What Would Six Percent Money Do For You

## On 5 to 35 years time, with no worry of foreclosure

### HOW WE WILL BE ABLE TO LOAN 6 PERCENT MONEY

Each share of stock is sold for \$100.00. Of this amount \$50 is placed in the Surplus, or Working Fund, and \$50 in the Capital Stock, or Guarantee Fund.

The Surplus is loaned to the members at 6 per cent interest per annum on first mortgages.

These mortgages are not sold, but they are placed in trust and bonds equal to their face value, bearing 5 per cent interest and secured by them, are issued and sold.

The money received from the sale of the bonds is then loaned at 6 per cent interest on first mortgages, which are also placed in trust, and bonds of equal value, bearing 5 per cent interest, are issued and sold.

This process is repeated until the Association has outstanding bonds equal to fifteen times the amount of its Capital and Surplus.

In addition to having the bonds secured by an equal amount in mortgages, the Guarantee Fund is pledged as further security for the bonds of the Association.

The bonds of the Association, thus secured, will be one of the highest class bonds issued in the United States, and will enable the Association to secure money for its members at the lowest possible rate.

### SEVEN AND THREE-TENTHS PERCENT

a year will pay a loan from us, both interest and principal in 35 years, without commissions, renewal charges, or other expense, and you may pay off your entire loan any time after five years.

Under the present conditions you are paying 9 per cent, or \$90 a year for interest alone, and at the end of the period for which it was loaned you still owe the principal of \$1000. Under our plan \$73 a year will pay off a loan from us of \$1000, both interest and principal at the end of the time.

This is a Co-operative Association, therefore, you must necessarily become a shareholder in order to enjoy the advantages it has to offer. Clip out, fill in and mail the coupon today. The sooner you join the Association, the sooner you will get your loan.

THE INTER-MOUNTAIN RURAL CREDIT ASSOCIATION  
SALT LAKE CITY, UTAH.

Without obligating me in any way please send me your sixteen-page booklet which explains in detail the plan of The Inter-Mountain Rural Credit Association and tells how I can become a member and enjoy the benefits of this co-operative organization of Utah and Idaho.

Name.....

Address.....

**The Inter-Mountain Rural Credit Association**  
606 McINTYRE BUILDING. SALT LAKE CITY, UTAH.



## Shall We Keep Cats On The Farm

HOW TO GET RID OF RATS AND MICE.

To the Editor:

In a recent number of the Utah Farmer I read an editorial that advised your readers to keep "one or more cats around the farm," in order to rid the place of rats and mice. These rodents feed bountifully at the farmer's expense the year round, and it is quite rational that some remedy should be suggested that will do away with them.

Now no one likes a kindly dispositioned cat or kitten around the yard or house any more than I do. I rolled and romped with a family of kittens by the hour when I was a boy; and even when I had grown to young manhood and was on a farm much of the time, the ridiculous antics of an old cat and her kittens always made me shout with pleasure. Today when such playfulness is not supposed to appeal very much to the fancy of a sober minded man, I cannot refrain from joining in the frolic with these sharp clawed, fur-coated little animals, that depend so much on human kind for their associates, and have the time of my life.

My old "Tabby" was a cat of distinction among a thousand of her kind! Anyone would have been proud to own such an intelligent animal! Who does not like to see her approach with back arched and tail erect, both indicative of supplicating friendliness? Who can resist her full, rich, singing purr, that sounds the gamut of the most perfect contentment known in all animal life? Her welcome though plaintive "meow" when she recognizes and greets a friend or an acquaintance—who can turn from such a salutation? And when she reaches up on ones knees and with the claws of her fore feet flexing and extending in short, rapid curves, gently but firmly pricking through ones clothing in an effort to remind one of her presence—can anything be more wholesomely domestic and satisfying?

Perhaps my readers may have noticed that I called old pussy she—I did so for a reason. The ordinary (I almost said ornery) tom-cat is not much of a mouser. He is nothing but a rampant, pugnacious, noisy old villain at night and spends much of his time during the day sleeping right where the mice almost are bold enough to play with his tail. As a matter of fact they scamper madly around him and he rarely deigns to notice them.

I can almost hear some vigorous defender of a splendid male cat that stays at home nights, catches all the mice in sight and whips the neighbor's dogs to a standstill, protest vehemently against classifying her old "Nig" with such a band of marauders. But he is only an example of another kind of a cat—that's all! Not another species, but another individual. Surely you couldn't deny a cat individuality, could you? Just consult any child who owns a pet cat of good quality and see how quickly he can and will disabuse ones' mind of such an error. Of course cats have individuality!

In looking up the ancestry of various female acquaintances of Sir Thomas I have been able to ascertain

this much: each one had a mighty good mother; but the paternal forebear was a gallivanting old ne'er-do-weel, the quint-essence of instability.

Nature endowed the mother cat with an instinct that knows no bounds and that will stop at no obstruction. This all-compelling power literally orders her to fight for her young to the bitter end; to feed them as bountifully as she is able and to teach them to be like herself, faithful under all trials. Such studious devotion to the cause almost defies comparison.

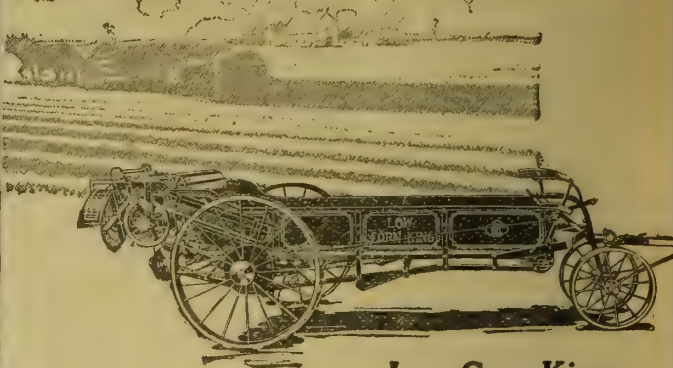
She it is that provides for the ravenous appetites of fast growing kittens. She is the mouser of the cat tribe! I have seen her sit for hours at a convenient distance from some runway of rats or mice, perhaps near a hole in this safe retreat, frozen into a immovable statue of patience, awaiting the passing or the return of Mr. or Mrs. Mousie or some of their numerous offspring. And it is sure death to the sharpnosed little rodent that gets within striking distance of her piercing claws. Her family cares weigh upon her heavily; but the worthless sire of her litter shuns all responsibility, tramps over the country fighting midnight brawls with other voyaging tommy-knights, and feasts and fattens on the farmer's brood of chicks, some nesting song bird or her tiny fledglings. And the taste of the tender, juicy meat of young birds, chicks, ducklings and poults spoils this marauding gamester for any other kind of food. He even sticks up his nose at a dish of warm rich milk, because the call of the wild, the hunting instinct, has been reawakened in him and he reverts to original practices.

As much as I would like to shield the old mother cat from the reputation of being a bird killer, I cannot do it; for I have seen her occasionally come in from a long morning's hunt in the fields and woods on a hot day with a dead or struggling bird fast between her jaws, so fatigued that she was quite unable to sound an invitation to the feast to her hungry little ones. Often she would lie down on her side, relax her hold on the bird and pant from pure physical exhaustion; this was her maternal instinct urging her on to super-physical efforts and she faltered not.

Whoever heard of Mr. Tommy exerting himself in this wise for any of his offspring? Why, he never even recognizes them—family ties and family troubles worry him not a bit! So to the one feline sex, the female bearer of all burdens, I am inclined to pledge my allegiance and my forbearance; but to my tommy-friends I am an enemy of altogether other leanings. And still I have not yet reached the point where I believe all cats are bad cats. I have seen kittens that were raised with chicks and birds that did not know the taste of the flesh of either, that looked upon these feathered bipeds and treated them as friends, that ate out of the same dish with them and drank out of the same vessel with them, always in peace and harmony.

I have always felt, however, that this kind of a kitten was tempered by his association with man and that

## Are You One of the Losers?



Low Corn King  
Low Cloverleaf

SOMETIMES Americans wonder why they get only about half the crop yields from an acre that are produced in other countries. Well, here's one reason—a large majority of the farmers in this country own no manure spreader. One corn belt state lost \$20,000,000 last year by the wasting and poor handling of manure. Are you one of the farmers who shared in this loss? If you are, you need an IHC manure spreader.

International Harvester spreaders, Low Corn King and Low Cloverleaf—besides being low, strong, durable, simple in beater and apron mechanism, with good traction, light draft, and plenty of clearance—have a really successful wide-spreading device.

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(INCORPORATED)

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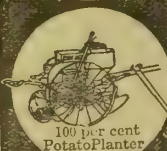
A GLANCE at Government reports shows how great a factor potatoes are becoming in Middle West production. Growers know that modern tools are necessary for satisfactory profit. Last year's crop is nearly 60 million short. Seed will be scarce and high. We have a Potato Planter that puts one piece in each place and one only.

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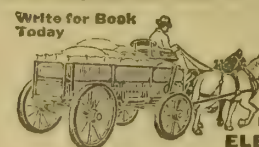
Potato machinery, garden tools, spraying machinery, etc., are built to give profit making service. Almost any combination you can think of in each line. Eighty years of factory and farm experience behind their manufacture.

Ask your dealer to show them and write us or our representatives: Utah Implement-Vehicle Co., Salt Lake City, for separate booklets fully describing lines in which you are interested.

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### FARM WAGONS

High or low wheels—steel or wood—wide or narrow tires. Steel or wood wheels to fit any running gear. Wagon part of all kinds. Write today for free catalog illustrated in colors.

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Can you think of something that will be more helpful to you than a weekly visit of the Utah Farmer. Brimful of good sound advice, helpful suggestions on every phase of farming and farm life. Our 800 pages of good reading for one dollar. Comes 52 times during the year. Renew your subscription today.



helped to make of him a cat of a higher plane; that because of this higher state he was more susceptible of development along constructive lines and could be trusted to stick to his plane with almost the same fidelity of purpose that many of his human friends manifested.

I once raised a mocking bird, a magpie, a parrot, a bull dog and numerous families of higher-plane kittens in friendly harmony, one with the other. I did not attempt the happy-family stunt, because "Polly" always insisted on biting the end of the dog's tail or the end of the cat's tail whenever these members came within reach of her strong mandibles—and that always started something I did not care to see finished. In consequence of "Polly's" tendency to do the destructive thing all the time I was convinced that the parrot occupies a lower plane of intelligence than does old pussy or the bull dog, and for this reason I always preferred to be on hand when mixing time came.

I do not know whether I was ever a cat in another incarnation; but I do know how the call of reversion to former types sounds in my ears and I feel compassion and sympathy for the kitten that eats and drinks so harmoniously with an animal that instinct has taught him for thousands of years to prey upon and to devour on every occasion. For this very reason I would not like to be the one to sound the death knell of all cats—for I do not look upon such a state of mind as quite normal nor on their destruction as being part of my function. Rather would I prefer to breed from a race of cats raised in life-touch with feathered things and believe in the ultimate success of growing cats that could be taught to eat other meat than the insectivorous

and song birds that are of such inestimable value to man.

So, while an incessant warfare is being waged against cats in general in many states and communities I am not prepared to say that I am wholly in sympathy with such a procedure. Neither would I be understood to favor the unhindered production of cats to the detriment of bird life; for in many communities in the United States the hunter cats (usually male cats) destroy millions of song birds annually. This state of things should not be permitted to exist any longer than it is possible to rid the country of this sort of cat. A bounty ought to be placed on the heads of such marauders by the state and a campaign of extermination ought to be instituted right away.

Still another way to handle such a question with justice to all persons would be to have cats taxed. At the present time the cat is not a domestic animal in the eyes of the law. For instance; if one had a very valuable Persian or other variety of cat and someone should steal it, the real owner could not institute suit to recover the animal although it were found in another's possession. Ownership of an animal that is not taxable cannot be proven; for untaxed it is neither subject to the laws nor is it protected by them; A strange state of affairs, isn't it?

I am quite satisfied that the cat is not the great exterminator of rats and mice that he is judged to be. I have heard a few persons tell about what a wonderful cat they had, that he would catch as many as five or six birds in day! My, what a wonderful deed to exploit in a cat! Others have told me, and I have seen this individual cat as well as the bird-catching kind, that their old cat will hunt and kill field mice, gophers and squirrels every day if he can find them and does a great deal to rid the community of all rodent pests. That is the kind of a cat to harbor and treat with kindness. But the trouble is the cat that goes afield for rodents also stalks birds and commits untold depredations upon the nests of certain species of birds that build on the ground or in low bushes and small trees. Rational procedure for the benefit of all kinds of cats, since we are on the subject of cats, is the wise way of handling this matter; and we should not take a step too far in advance of the sensible way, for fear that these steps might have to be retraced and that would be disastrous.

To those who disclaim any manner of allegiance to our cat friends, whether in a city home or on a farm around the barn and outbuildings, I wish to say that science has discovered an easier way to rid the country of damaging rodents than keeping cats around the place. Perhaps I ought to say that there are two ways, for farmers seem to have known the latter and have forgotten its value in their desire to have a live target to shoot at. I refer to the beneficial hawks and owls that are quite exterminated in many localities in this state; and in consequence of such a bad state of affairs, rodents are making way with the crops in these sections. I am quite eager and willing to admit that I am glad of this destruction of grain and grasses where these unthinking individuals have killed the hawks and owls that ought to be saved. It serves any farmer as he ought to be

served when he violates the balance that nature has instituted on this earth and he ought to suffer and suffer much for just such wanton destruction. Still, such a statement does not right the matter and does not increase the numbers of hawks and owls in such communities, but it may have some weight with the unthinking ones and teach them to begin at once to construct and to conserve.

The first method mentioned is none other than the dissemination of certain bacterial disease among all the rodent family in our midst. Such bacterial disorders are wholly non-communicable to any other animal of any kind and they furnish a perfect means to do that thing for which all of us are striving so hard—elimination of pest life of all kinds.

The state-wide adoption of such a procedure would lessen the propagation of such vast number of undesirable cats and would increase in great proportion the numbers of song and insectivorous birds that our great state needs so much. Isn't bird-life really more desirable and more pleasing than either cats or rodents? Is there among us any person who prefers to hear the night-wails of the feline, or the scamper of rats and mice between the walls of our dwellings, to the singing of feathered songsters by day, or even by night? For in some localities, in balmy southern California, for instance, I have heard the mocking bird pour forth his sweetest melody at one o'clock in the morning—singing as though his heart were too full of song for the day, and he must get it out or else he would burst with its volume! Could anyone of us object to such a concert, even though it were midnight? Surely no one who gives such a serious matter a moment's thought could or would admit that he had any other preference than for God's glorious songsters.

CHAS. G. PLUMMER M. D.

CASH VALUATION FOR TAXING.

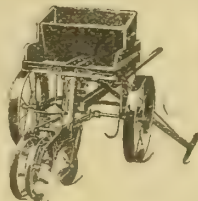
In the various discussions of tax problems of late there has been shown a violent distrust of, and antipathy to, the cash valuation plan of assessment which is now obligatory and may not be evaded; nor can it be in any manner changed except by the same body which enacted it—the Legislature.

The general ground for objection to the cash valuation plan has been the suspicion that it was advocated for the purpose of enabling the tax levying authorities to wring more money from the pockets of the people, the limit having been reached under the old valuation; but inasmuch as at the same time a definite percentage was fixed, and that limit would be rather below than above the one heretofore existing, that fear may be dismissed and with it further discussion of that phase of the tax problem.

Considered upon its merits there can be no logical objection to cash valuation as the basis for assessment. Upon the other hand, it is eminently fair and places all classes of property upon an equality. Heretofore it has been left largely to the discretion of the various boards of county commissioners and the assessors, and the results have been varied, incongruous and unjust. Under the old system some property was assessed to probably sixty per cent of

its actual value, and from that figure it ran down to as low as ten per cent; and a feature of the system was that the poor man with only a humble home and perhaps a team and cow, paid the higher rate upon his entire possessions, while his neighbor, ten or twenty times richer, paid at a far lower rate upon the property in sight, and perhaps evaded altogether taxation upon the bulk of his possessions. Corporations, too, have escaped lightly in proportion. Cash valuation itself will not uncover hidden assets, but should render equal and exact justice to all that is in sight, which is right. One man's dollar or dollar's worth is worth neither more nor less than that of another man or set of men, and should bear neither more nor less of the common burden. The new system will equalize, but should not raise taxation, except in such cases as have heretofore escaped a just proportionate assessment.

There still remains, however, a wide field for discussion relative to the purposes for which we are taxed, and the manner in which the money is spent, and to the investigation and discussion of these subjects, and the suggestion of remedies for existing errors of purpose or methods, a body of representative men—a tax payers' parliament, so to speak—might well and profitably devote their attention, for the general opinion is that the burden is becoming too heavy to be borne.—Logan Journal.



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AT A

POPULAR PRICE

With the great variety of sizes of pieces used for potato seed it has been found impossible to design MACHINERY to do anything like accurate work in dropping the seed at the desired distances and to deliver each and every piece into the ground uninjured and certain to sprout.

With a KEYSTONE Hand-Drop Planter this uncertainty has been entirely overcome and with this machine there is neither waste of expensive seed nor high-priced land. Strong, durable, simple; it is the ideal machine for the practical potato raiser.

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A. J. PLATT, MFG. Sterling, Ill.

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DON'T FORGET  
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**GOOD SEEDS**

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I will give a lot of new sorts free with every order I fill. Buy and test. Return if not O. K.—money refunded.

**Big Catalog FREE**

Over 700 illustrations of vegetable and flowers. Send yours and your neighbors' addresses.

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**Shoes Repaired  
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**BIG SAVING IN SHOE BILLS.**

Shoes are repaired same day as received and returned by C. O. D. Parcel Post, and delivered to your door. It is just like having a modern, well equipped shoe shop on the place.

Price list: Mens half soles 75c, ladies half soles 50c, heels straightened Men's 35c, Ladies 25c, rubber heels 40c and 50c. Patch 10c and up.

It will save the 10c C. O. D. charge by sending repair charge and postage with shoes.

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Our office at Salt Lake City, Utah,  
is at 712 McIntyre Building.



New York Office 5th Ave. Bldg.  
S. E. LEITH, Mgr

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Utah Horticultural Society, Utah State Dairymen's Association, Utah State Bee Keepers' Association, Bear River Valley Farmers' Protective and Commercial Association, Agricultural College Extension Department and Utah State Fair Association, Utah-Idaho Millers' and Grain Dealers' Association, Utah Fruit Growers Association.

#### OUR GUARANTEE

We guarantee every subscriber against loss thru dishonesty or attempted swindle by any advertiser in this publication. We do not attempt, however, to adjust trifling differences between the subscribers and honest, responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within thirty days from date of the transaction, and the subscriber must have mentioned Utah Farmer when writing the advertiser.

Do you think it is a poor policy to raise corn on land which would produce good celery? It looks like a failure to get the most out of the land.

#### SUGAR BEET GROWING.

Sugar beet growing has done as much to make agriculture a recognized science in this State as any other one factor. Successful beet growing demonstrates the actual value of improved methods. The farmer who follows slipshod methods, who spends his time on the street corner during the thinning and irrigating seasons, and who spends his time bemoaning the poor lot of the farmer, is not likely to succeed in this industry. The new generation of farmers in this State have found that in beet growing in the State they have ready and profitable returns, and the industry has become one of value to the farmers of this region.

Sugar beets generally respond to careful systematic farming and they, like many other crops, soon show lack of attention.

#### HAVE A GOOD SIRE.

It costs no more to raise a good animal than it does a scrub. Then there is a certain amount of pleasure in owning or producing a good animal. In some parts of our state, small communities are becoming known because of the fine live stock they own. When you do a little investigating, you learn that a few years ago a good sire was purchased and many have profited

by his coming. It seems that such results would serve to teach us the value of a good sire.

#### THE U. E. A.

In the recent institute held by the U. E. A. at Salt Lake City one session was devoted to Agricultural Education. Rural Credit, Club Work and Industrial subjects in the High School, were the special topics discussed. The need for a curriculum in our schools to meet the needs of the rural boys and girls has been growing. The problems presented for solution in the country are as numerous as those in the city. It is well that our educators are giving attention to our needs and making possible a ruralization of our country school.

If the rural school is to meet the requirements of an efficient institution within a community it must train the youth for effective service in that community. It must learn him to love the things with which he must mingle.

He must be skilled in the craft and knowledge of agricultural activities. Before this is possible the problems must be solved with a fair degree of accuracy by the educators who must lead the way. We therefore compliment the executives of the U. E. A. for creating the agricultural division in their organization.

#### BUILDING MONUMENTS.

Frequently we read of men spending thousands of dollars to erect monuments of costly stone to perpetuate their names. No one ever benefits from such a procedure except the monument manufacturer, and he only to the extent of a few dollars for shaping and setting the stone. Some men prefer to spend their money in more useful ways and in so doing are building for themselves monuments of far greater worth—monuments which will not only perpetuate their names but which will place them on the list of public benefactors. There are plenty of methods of accomplishing such ends in the country. Improving and building up the soil, establishing pure bred herds, flocks and studs, introducing alfalfa in a community, building good roads, contributing to community welfare in the improvement of schools, churches and cooperative organizations—all these furnish a world of opportunity for constructive effort which merits the attention of both men and women who would leave posterity something really worth while. This kind of monument building is what counts most, regardless of the amount of ready money one may have to spend. What is a costly stone in a graveyard, which no one wants to look at and which few ever see, compared to a real public service which leaves the world better for the benefactor having lived in it?—Farmers Review.

#### BOOSTING.

There is a great deal in boosting. We have heard much about this for many years, but we might sometimes fail to realize its value. Some people use as their slogan "Don't knock." Ordinarily this means about the same as "be a booster," but yet it might be possible to boost and yet knock, or at least vigorously kick. There are two kinds of kicking, constructive and destructive. Destructive criticism is the kind we should indeed eliminate. It is prompted by the spirit to destroy. It merely scatters the seed of discontent and in no way does it improve. If there

however, be a condition which warrants criticism the booster may constructively criticize and gain a profitable end. It must however be done with the idea of improving. Regardless of our differences in our competitive fields we should all join in boosting for Utah. As farmers we should boost for our industry. The possibilities which await it are many but the path for progress must be cleared. We must prepare it for the future of which we think it possible. This must come from within. This calls for unity. When we are one then can we make our strength effective. Whether it be "boost" or "Don't knock," let us get the spirit.

#### HAVE A LETTERHEAD.

If a farmer today will follow modern agricultural methods he will have modern business methods. The farmer of today is taking his place in the world as a business man. New obligations are placed upon him for he must not only be a producer but he should also be a salesman and a buyer.

In the matter of selling, a certain amount of advertising is necessary. One of the important things and an inexpensive way of getting this publicity is with printed stationery.

On all printed matter the name of the farm should be made prominent. The name of farm and owner should be so connected that the reader will think of them as one.

Use a simple neat illustration, that will indicate the type of farming in which you are engaged. A stockman, a picture of a prominent animal, a fruit grower should show the kind of fruit he is growing.

Printed stationery is an indication of a well established business, that the farmer is using up-to-date methods. Care should be taken in the designing and printing and good quality of paper used.

The cost is small compared with the results that may come from using nicely printed farm stationery.

#### WINTER DAYS.

How do you spend the winter? Does it bring a profit to you? Or do you consume the previous summer's savings? There are few industries in the world that even attempt to continue unless they are run throughout the year. Each month being made to add its profit to the aggregate. In fact a few months of idleness in each year to many would measure the difference between success and failure. In farming it is likewise as necessary to make the winter months render a profit as any other part of the year. It indeed is a gloomy outlook if each year the farmer must be assigned the task of raising sufficient product in summer to last the succeeding winter. Such a system generally finds little progress.

The winter months can be made profitable. A flock of chickens properly handled will bring in sufficient returns to pay the seasons expenses. A bunch of sheep or hogs can likewise be made profitable. Many farmers are well fixed for wintering a small bunch of ewes and then lambing them in the spring.

The feeding of cattle and colts can likewise be made profitable. A few dairy cattle can be kept. There are numerous ways of utilizing the winter days and making them productive. The wise farmer will so arrange his business that both winter and summer will bring profits.



# Make Your Harness Last Longer

By The Oil Philosopher.

To make your harnesses last longer and maintain a new appearance, it is necessary to protect them from dampness, dirt, grit and other destructive elements.

## DUCK-BACK Harness Oil

makes your harness water-proof and keeps the dust and grit from working into the pores and cutting the fibre of the leather.

**Utah Oil Refining Co.**  
Refiners  
Salt Lake City, Utah.

## Sugar Quality Plus Absolute Purity

To make a product as perfect as Utah-Idaho Table and Preserving Sugar requires the highest standard of skill, equipment and care. The raw materials are the choicest, sanitation is the watchword; every protection and the keenest attention is attendant on each step from placing the beet seeds in the ground to placing the sugar in the store rooms of merchants.

Utah-Idaho Sugar is produced under ideal conditions. The wonderful effects of our healthful climate add to its goodness. The sparkling crystals of this perfect sugar proclaim its absolute purity.

Your grocer will supply you with this sugar if you say "Utah-Idaho Sugar," when you give your next order.



READ  
CANNON BROTHERS  
ADD ON BACK PAGE.

## WHAT PLACE SHOULD FRUIT GROWING HAVE ON A WELL BALANCED FARM IN UTAH?

(Continued from page 5)

considered of over 10 cents per box as mentioned above.

The second factor to consider is sensible pruning, so as to give a maximum crop of fruit. That sounds easy, but it appears to be one of the most difficult things in the whole process.

Third, proper thinning to obtain a high grade product. It has been definitely shown that it costs less to take an apple off the tree at thinning time than at picking time, and that oftentimes the removal of more than half the load will not reduce the total production at all, but will raise the entire crop one grade.

Fourth, control of the codling moth cheaply, and when we say control, we mean control. Too many of the fruit growers are controlling the codling moth like the man captured the bear—all he needed now was somebody to help him get loose. The prize fighter knows that he not only has to reach his opponent, but that he has to deliver a punch on the end of the reach. Too many of our fruit growers are reaching all right, but lack the punch. With the prize fighter, if you count ten he is out, but with the codling moth if you can count ten (worms on a tree) you are out, and yet the handling of the codling moth is so easy that the writer is almost ashamed to mention the one absolute requisite and that is to kill the worm. It does not make any difference how you kill them: by cleaning up the trees, spraying, pulling the wormy apples off at thinning time or in any other way, just as long as you kill them. The codling moth killed by one process is just as dead as if killed by another. The idea of spontaneous generation was expounded a century ago. Codling moths like all other living things come from previous existing worms. The secret of success, therefore, as I have just mentioned, is to kill these "previously existing" worms.

Fifth, diversification on the farm or in a community, or both. The great drawback to much of the Pacific Northwest fruit industry, as shown by these tables, is that the fruit is raised in isolated, high specialized, fruit growing communities in which there are no other interests, where hay and horse feed are high, where flour, milk and butter are expensive, where there is a dearth of labor in certain seasons and a great excess of it in others. Probably considerable of the high cost of cultivation charged is not because the orchard needed cultivating, but because they had nothing else to do.

An apple orchard located in a fertile, sugar beet growing, livestock producing and general farming valley, will be much more profitable than under these conditions. It will be possible to obtain hay cheap enough to keep livestock profitably and thus produce manure profitably, and thus to increase fertility to produce more apples, and the greater the number of apples that are produced on an acre with the same labor cost, the greater the profit.

Under such conditions with a few good dairy cows on pasture, a few hundred high egg-laying fowls, and

pigs enough to pasture off the cover crop on part of the orchard at least, together with farm land equal to the orchard area, the sources of income of the fruit grower will be multiplied; his work diversified; there will be opportunity for profitable employment in other lines when the orcharding interests are not needing it; an opportunity to obtain labor in abundance when orcharding demands it. If there are boys enough in a community to handle sugar beets, there will be girls enough to handle fruit; the family incomes will be well balanced and the community prosperous.

The writer believes in individual specialization and in community co-operation. A fruit grower should be a specialist in fruit growing. That does not mean that he should not have other interests, but his fruit growing should be his main specialization. The fruit growers of a community should co-operate and grow the same varieties, use the same grading system and the same marketing organization, but this can be done just as well in a community in which there are other interests equally specialized as in a community in which all the interests are in one line of endeavor.

To the writer the outlook for the fruit grower is more than hopeful; it is promising. The wild cat promoter is, we hope, a thing of the past. Fruit growing in the future will be the business of raising fruit, not raising orchards to sell, and when that day comes, business methods will take the place of promotion methods, and under business methods and proper organization, fruit growing can be made a safe, conservative, profitable business fully equaling in stability the other lines of agricultural endeavor.

### HOW TO PREVENT

#### "CATCHING COLD"

Dr. I. J. Murphy.

"Colds are catching. People suffering with a cold should not cough or sneeze without holding a handkerchief over both nose and mouth. They should spit only in proper receptacles. Small drops containing millions of germs may be scattered about in coughing, sneezing, or as a result of ordinary conversation. A person with an acute cold should try not to infect others.

"To keep up the general resistance the skin should be kept in a healthy condition. This can be done best by taking a warm bath at bed time at least twice a week and a cold shower or sponge bath of very short duration every morning.

"At this time of the year most living quarters are kept too warm. The habit of living in overheated rooms lowers the general resistance and injures the membrane lining of the nose and throat so that one becomes easily a victim to a cold, bronchitis, or pneumonia. Fresh air, too, is just as essential in a sleeping room in the winter time as it is in the summer time. It should not be excluded, but there should be a proper amount of clothing for protection. Clothing should suit the kind of weather, not the season. In warm spells clothing should be reduced; in cold snaps, increased. Clothing should be reduced when one enters a warm room and put on again when exposed to the cold."



## Hewlett's Luneta Baking Powder

Preferred for

- its purity
- its strength
- its price
- 25c the pound.

## Your Farm Equipment

should include "Never-Rip" work clothes.

—They'll give lasting service and pay for themselves many times over, in lightened labor, clothing saved and in service given.

—For that big farm or for the little backyard garden this spring, there's no assistant more able and useful than

## SCOWCRAFT NEVER-RIP

—1200 farmers and working men ask for them by name every day—

—because they know that entire satisfaction is guaranteed when the label says "NEVER-RIP."

### Big Money in Running Water

Let us start you in a business that will make you from \$15 to \$50 a day when farm work is slack. Other men have done it for years with an

**One Man One Team**

**Improved Powers Combined Well Boring and Drilling Machine**

Same rig bores through any soil at rate of 100 ft. in 10 hours, and drills through rock. One team hauls and operates machine. Engine power if wanted. Easy to operate—no experts needed. Small investment; easy terms. Make machine pay for itself in a few weeks work.

There is a big demand for wells to water stock and for irrigation. Write for free illustrated circulars showing different sizes. **Lisle Manufacturing Co.** Box 976 Clarinda, Iowa



## THE HOME

### THE FARM KITCHEN

Henrietta Kolshorn.

"The men of the world build houses, but the women make the home." The words of the old poem I had heard in my childhood kept running through my mind as I watched a busy frontier woman trying to cook a dinner in a man-made house.

The kitchen, a small room attached to the main part of the house, could have been a pleasant room if the builder had given careful thought to the comfort and convenience of the home-maker who was to spend many hours each day working in it, but the house had been built to suit the convenience of the builder—not the home-maker.

Little thought had been given to the ventilation or light. The only window was small and placed at one end of the kitchen. Even in the daytime the woman found it necessary to light a candle to see the cake in the oven. The bread she must lift from the oven and carry to the window for inspection. Dark green paint on walls and ceiling absorbed some light and gave the room a dreary, dingy look. The ceiling was low, and no means of escape for odors and steam had been provided. The ventilation was poor and when the room became too warm the door had to be opened and a draft was unavoidable. The kitchen stoop had three high steps, over which had to be carried all water that was used in the house. The well was twenty-seven feet from the house and was supplied with a pump that required a great expenditure of strength. The cellar could be approached only by an outside entrance or through the dining room and the bed room and down dark, narrow stairs.

The woman who has been doing the work in this kitchen for ten years has walked many unnecessary miles and has spent months, if not years, in wasted steps. Much of the woman's strength could have been saved by putting two more windows into the kitchen, by changing the cellar door and stairway, and by supplying the kitchen with running water, sink, and drain. The walls could have been painted with some light colored paint that would have added cheer and neatness to the room. The changes needed were simple and could have been made with a little expenditure of time and money.

One of the strange things about the situation was that the woman accepted the conditions as a matter of course. She had become used to it and did not realize that she was using strength and time unwisely and was failing to be a companion to her husband and children, all because some unwise builder had failed to plant a farm kitchen conveniently.

### BREAD FROM WINTER WHEAT.

The process of bread making from winter wheat flour differs from that of spring wheat flour in the following particulars:

1. Liquid—For a given weight of flour, winter wheat requires more liquid per loaf than spring wheat flour. A dough from winter wheat flour should be made just stiff en-

ough to hold its shape—just stiff enough to spring back with the touch of the finger.

2. Manipulation—A winter wheat flour dough requires three risings; it should never get overlight; it should rise to a little less than one and three-fourths times its original volume in the last rising.

3. Baking—Winter wheat flour dough should be baked at 356 degrees F. to 428 degrees F., thus allowing it to finish its proving in the oven. The dough can, with profit, go to the limit of fermentation in the oven.

4. Shape of Loaf—The best shaped loaf from winter wheat flour is produced by allowing the dough to double its bulk and then baking at 428 degrees F., but such bread is not of good quality.

5. Flavor—Winter wheat bread is more nutty in flavor than that from spring wheat.

### BAKING PROJECT

#### Graham Bread.

2½ c. hot potato water, milk or condensed milk or ½ of each.

½ c. liquid yeast.

1-3 c. molasses.

1 to 2 tb. lard if milk is not used.

1 tb. salt.

3½ c. Health or white flour.

3½ c. Graham flour or all Graham may be used if desired.

1 c. chopped nuts or raisins may be added.

Measurements are all made level.

Pour hot liquid into pan or mixing bowl, add salt, lard and molasses. When lukewarm add yeast and flour enough to make a thick batter. Beat well. When double in bulk add remaining flour or enough to make right consistency. Knead well and shape into loaves and put in baking tins. Let double in bulk and bake. Graham bread is better not to rise twice in form of dough. The addition of the Condensed milk gives it a delicious flavor.

It is much better to bake Graham bread in separate tins. The deep loaf-cake tin or baking powder cans are good.

#### Quick Raisin Nut Bread.

1½ c. cream or sour milk or sweet rich milk.

1 t. soda.

½ c. molasses.

½ t. salt.

2¾ c. graham flour.

1 c. chopped nuts.

1 c. small seedless raisins.

Bake in slow oven 1 hour. This bread makes delicious sandwiches when fresh and is nice for a girls' luncheon party to serve with a salad. When all sweet milk is used, use ½ t. soda and 3 t. baking powder.

#### Fancy Rolls.

1 pt. scalded milk, when lukewarm add ½ c. liquid yeast.

3 c. flour (varies with kind of flour). Beat all well together and let rise till double in bulk, add, 3 or 4 tb. butter, ¼ c. or 4 tb. sugar, 1 t. salt, 1 egg, well beaten.

Work in flour until stiff enough to knead and then work on board until very smooth. Let rise again and then shape into rolls, cinnamon buns or

## GREATEST TWO WEEKS OF UTAH'S YEAR

JANUARY 24—FEBRUARY 5, 1916

Just at the time the Farmer and his Wife need a vacation.

## Farmers' Round-Up

AND

## Housekeepers' Conference

AT THE

## Utah Agricultural College

### Logan, Utah

The most notable annual convention held in the Inter-Mountain States.

Progressive Farmers, Home-makers, State Scientists and Educators will be in attendance.

Progressive Farmers, Home-makers, Scientists

on Utah Farming and Stock Raising which aggregate \$200,000,000 and on the various phases of Home Management.

Special Emphasis will be placed upon:

How to Increase Farm Profits.

How to Improve Methods of Marketing.

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Farm Repair Work and Horseshoeing—in shops.

Veterinary Practice—in Veterinary hospital.

Potato and Grain Diseases—in Botany laboratory.

Judging Agricultural Products—in Agricultural laboratories.

Home Nursing—in Women's Building.

Dress making and Millinery—in Women's Building.

Registration Fee, \$1.00. Day Nursery in Gymnasium.

twists, let rise again, and bake in a rather hot oven, brushing lightly with butter before baking or a thin sugar syrup when partly done. Roll dough thin and fold in three layers before cutting strips to twist. Rolls may be glazed with partly beaten egg white when almost baked.

#### Four Loaves of Bread.

1 qt. hot liquid, water, potato water, or ½ water and ½ milk.

1 c. liquid yeast.

3 tb. salt.

4 tb. sugar.

14 c. flour (amount varies with kind of flour).

Put hot liquid into mixing pan or bowl and add salt and sugar. When lukewarm add yeast and enough of the flour (about ½) to make rather thick batter. Beat well and set to rise. When double in bulk, add flour enough to make dough the right consistency. Knead well and let double in bulk. Shape into loaves,



let double in bulk once again and bake.

A little lard (about 2 tb. to four loaves) may be added if desired. When this is done, melt it in the hot liquid. Measurements are always made level.

#### ANGEL OR WHITE SPONGE CAKE.

One cup flour or  $\frac{1}{4}$  pound flour.  
Two level teaspoons corn starch.  
Whites of 14 eggs and a pinch of salt.

One cup sugar.  
One scant teaspoon cream of tartar.  
One teaspoon vanilla flavoring.  
Sift the flour and corn starch eight times. Beat the eggs until frothy. Add cream of tartar, beat until stiff but not dry. Add flavoring gradually and while stirring lightly add the flour and corn starch to the mixture.

Bake in a moderate oven. As the cake rises to the top of the pan increase the heat and bake until the cake is a light brown. If the oven is too hot the cake will not rise, but a crust will form on the outside and prevent the inside from expanding. The cake should be baked from forty-five to fifty-five minutes.

I find that in this climate I use less shortening and less sugar than I would use in cakes at a lower altitude. I also find that there is a great difference in flour, and one must learn to use the particular brand on the local market. Bread flour may be used in place of pastry flour for cake making, provided two level tablespoons of corn starch are substituted for two tablespoons of flour in each cup.

#### SANDWICH MATERIALS

Bread and butter.—Cut the bread in thin slices. Spread the butter evenly on both slices and press together.

Lettuce.—Make a bread and butter sandwich and place a leaf of crisp lettuce, washed and thoroughly dried, between the two slices. Put a teaspoonful of mayonnaise dressing on the lettuce leaf.

Nuts.—Make a lettuce sandwich, spread one side with nuts chopped fine, and mixed with good dressing.

Chicken.—Chop cold, boiled chicken and moisten with mayonnaise dressing. Spread between bread. Add a lettuce leaf.

Eggs.—Chop the white of hard boiled eggs very fine. Mix the yolks with mayonnaise dressing and season with pepper and salt. Add the whites and spread between bread. Lettuce may be used also.

Dates.—Make a filling of one-half cup of stoned dates, one-half cup of sweet cream; spread between slices of buttered bread.

Pimento and cheese.—Make a filling of one-half cup of cream cheese and one-fourth cup of chopped pimento, 2 tablespoons salad dressing, salt and pepper. Spread on butter evenly. Cottage cheese may be used or a pimento may be left out.

Peanut butter.—Peanuts ground and mixed with a salad dressing make an excellent filling. The commercial peanut butter may also be used. Spread evenly between buttered bread. A crisp lettuce leaf adds to the attractiveness of this sandwich.—Missouri Agricultural College.

#### MAKING SAUSAGE.

Any clean bits of lean pork may be used for sausage. For a good mixture

3 pounds of lean to 1 of fat are recommended. The relative amounts of sausage and fresh pork desired will govern what parts other than scraps will be converted can into sausage. To each 4 pounds of meat the following amounts of seasoning are about right: 1 oz. pure fine salt,  $\frac{1}{2}$  oz. ground black pepper, and  $\frac{1}{2}$  oz. of pure leaf sage rubbed fine. However it is safer to fry a piece and test it, thus the seasoning desired is insured.

#### HOW TO GET GOOD MANNERS.

"Good company manners depend upon good home manners. As for table manners, the active child who from his earliest years has been accustomed to regular meals of simple food with sufficient variety for his health and pleasure will be hungry enough at mealtime to eat anything that is put before him. If from the beginning he has been encouraged by example, then good table manners will be as natural as breathing. They will be a part of him, and he will make use of them wherever he is.

"The place for a parent to begin training the manners of her child is with her own manners. Whenever a mothers complains to me of the bad manners of her child she is unconsciously lodging a complaint against herself as a mother. Of course a certain amount of boisterousness and willfulness is to be expected, and hoped for, in the child; but bad manners lessness, lack of consideration, artificial ideals, lack of time—many busy mothers, it is true, cannot give the time they wish to their children—of those who are responsible for the child's training.

"The old ideal of training in behavior was based largely upon the principle of the child's consideration for its elders; the modern principle demands also the elders' consideration for the child."—Womans Home Companion.

#### PUDDING-HEAD PHILOSOPHY.

A leaning gate is an indication of a lazy owner.

The man who is stingy may own bees that are stingy.

The best a man can do is the least he should accomplish.

Prosperity will not abide long with him who abuses it.

Bad times comes from too much living for good times only.

Some men go in for athletics and others mow the lawn.

Some of the exquisites are pretty good longhorns when fried out.

Decency costs nothing and pays one hundred cents on the dollar.

Advice is one of the things most people would rather give than receive.

The airship will put the coach dog out and give the skye terrier his day.

A good neighbor is one who refuses to lend you the tools you ought to buy for yourself.

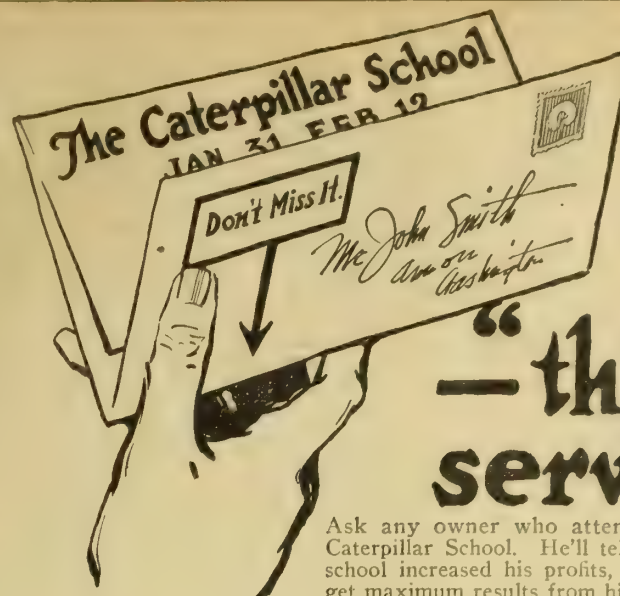
Just keep on hoping, believing and hustling, and it will all come out right some day.

When people are feeling particularly good for nothing, they always say, "Let us go to the movie show."

A man has a right to make a fool of himself once in awhile, but he has no license to keep it up all his life.—Exchange.

#### CULTIVATE CHEERFULNESS.

It is our duty to be as cheerful as possible, lest we rob someone else of



# —that's service—

Ask any owner who attended our 1915 Caterpillar School. He'll tell you how the school increased his profits, taught him to get maximum results from his tractor. And our annual Caterpillar School in Stockton, Calif., and Spokane, Wash.—free to owners—is just one branch of our complete service.

## CATERPILLAR

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Don't Say Caterpillar Unless You Mean Holt!

The best service we give is the service we build into the Caterpillar itself—the kind of service of which owners write: "Have used my Caterpillar five years. The original track chains are still in use."

"Repair bill for season less than \$10.00."

"\$10,000 worth of work this year—repair bill \$1.65."

A postal will bring you Bulletin E 334 which describes the Caterpillar fully. Or if you're interested in the Caterpillar School, opening January 31st, write for particulars—a low tuition fee admits you if you're not a Caterpillar owner.

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F. B. Connelly Co., Sales Agts., Billings, Great Falls, Mont.

pleasures, and in doing this, in trying to give pleasure to others, we find joy ourselves. The greatest happiness comes from making others happy.

We can always find something to do to scatter sunshine where it is dark and gloomy. A pleasant word, a smile or a hearty greeting will make someone's pathway brighter and give joy to you.

Sometimes misfortunes overtake us and it seems as though we can not bear our burdens. Through our blinded eyes we see no hope; all the world seems against us. But if we will open our eyes we will see sympathy. Someone is ever ready to help us, to cheer us in our work. Give cheerfulness and you will have more to give.

#### THE FARM DEMANDS BRAINS.

Years ago a man had three sons for whom he selected vocations. The first one was very smart, the next one very good, the last one was simple minded. In his wisdom this man said: "This one who is very smart I will make a lawyer of; the good one shall be a preacher; Jack knows so little, I will make a farmer of him.

But since then times have changed. There is no occupation in the world that calls for more ability and brains, training and adaptability than farming. It is a mans job. To plow and sow and reap without understanding is no more real farming than cutting a man's leg off with an axe is real surgery.

Agriculture is the basis of the

The **MOTHER** and **CHILD** at birth need skilled and careful attention. You can have care from those who have spent and are spending a lifetime preparing and perfecting division of hospital work.

Not alone the professional side but as well the equipment and tools and material for this work receive our attention.

"Come and see our home hospital."

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Nations' wealth. The soil is our greatest asset, and the intelligent building up of this demands, broad experience, technical learning, sensible systematic education, big minds unerring judgment—in fact the best that humanity produces.



## ORCHARD AND GARDEN

### INDOOR WINDOW BOX.

**Ferns, Ivy, Smilax, and Geraniums  
Are Easily Grown—Flowering  
Plants Require Special  
Conditions.**

Those who love plants need have no hesitation in installing window boxes in their homes. The old notion that plants make living rooms unhealthful is quite unfounded, according to specialists of the department, for the consumption of air by plants is so small that it may safely be ignored if the room is ventilated as it should be. On the other hand, the window box will furnish much interest and pleasure through the period when outdoor gardening is impracticable. The following suggestions for a window box are made by the department's gardeners:

#### Preparing the Box.

A good depth for an indoor window box is 10 to 12 inches. The larger the body of soil the easier to maintain uniform moisture conditions.

Cover the bottom of the box with stones and broken pottery to give drainage, and cover this with a layer of moss to prevent the soil above from working down through the stones. The drainage and moss should take up 2 to 3 inches. The soil should come to within an inch and a half or 2 inches of the top of the box.

Those who do not have gardens will do well to get potting soil of the nearest florist. It is desired to prepare it, one part compost, one part good loam, and one part sand should be used. The compost should be cow manure and good turf rotted together for a year and turned two or three times in the interim. Well-decomposed leaf mold would answer as a partial substitute for the compost. In regions where the forests have a large share of beech, maple, elm, basswood, and ash, the best potting soil is "woods earth." This is soil from a sheltered position in the woods, and has a large proportion of leaf mold. Oak and chestnut leaves do not decay in mold as readily as those mentioned above. One-twentieth part bone meal is a good addition to the mixture. If the loam is very heavy, containing much clay, its proportion should be somewhat diminished. If the loam is light and sandy, reduce the amount of sand, or in some localities omit it altogether.

Place the top of the box level with the window ledge so to get as much light as possible. It may be fastened with brackets, placed on a table, or on legs. Keep a drip pan beneath to prevent water from soiling the floor. The box may rest directly above the drip pan on legs half an inch to an inch high, or it may be water-tight with the exception of a hole at one end to let out the excess when over-watered.

Allow the top of the soil to become quite dry once in a while. Experience in watering will teach the owner to regulate the supply. The boxes may need watering every day in sunny weather, especially toward spring, or at least every other day, but in cloudy midwinter weather they may not need it oftener than once a week.

In steam-heated rooms a receptacle containing water should be kept on

the radiator, so that the air will not become too dry.

#### Foliage Plants Most Satisfactory.

Select plants with the same general requirements, as plants of different character demand different treatment. It requires more care through a longer season to produce blooms in a window box than to grow good foliage. Flowering plants are exacting, and will not as a rule find enough light in the ordinary living room, even though placed near the window, although they may do well in a conservatory.

Vines are among the most satisfactory plants for a window box. Among those that can be trained up over the window to make an attractive green frame are English ivy (*Hedera helix*), German ivy (*Senecio makanioides*), and similax (*Asparagus asparagoides*). The first two are grown from cuttings, which are best started in spring, while the smilax is best started in late winter from seed. Rooted plants of all of these may, however, be purchased from florists. Strings to support the vines are necessary.

Geraniums when grown with these vines are attractive as foliage plants, but are not likely to give much bloom in a soil moist enough for the vines. To induce bloom, geraniums should be grown in separate box or in pots.

#### Begonias Especially Desirable.

Begonias are admirable plants for growing in window boxes. The foliage of all begonias is attractive, but especially so are the beautifully marked leaves of the Rex variety. The Beefsteak, Gloire de Lorraine and other varieties may be expected to grow well and to flower under the conditions that suit the vines already described.

Ferns in variety are available for the window box and may be selected at any florist's to suit the taste of the grower, but dwarf varieties are better suited for the room available. Ferns may be grown with begonias satisfactorily. Both require a temperature lower than the average living room.

Coleus is another group of plants that may be grown in a window box, but they must have sun. The leaves of these plants have a wide range of color and marking as well as of size and shape. They must have a warmer atmosphere than the plants already mentioned, temperature of 55 degrees to 60 degrees at night being desirable. The mealy bug is often quite troublesome on Coleus.

For an upright plant growing a foot or eighteen inches high *Aspidistra* is satisfactory. The leaves of this plant grow in some what the same manner as the garden flags, but there are varieties with variegated leaves as well as those with green leaves.

Kenilworth ivy is a trailing plant that is attractive when it droops over the sides of the box. It is a delicate-looking easily grown vine, with small leaves and small white flowers. It is usually grown from seed, but late in the season it may be better to purchase plants from the florist.

Another good plant for drooping over the box in the *Mesembryanthemum tricolor*, or air plant. It is very easily grown from cuttings.

To make a variety some of the

## TWO FARMS FOR SALE

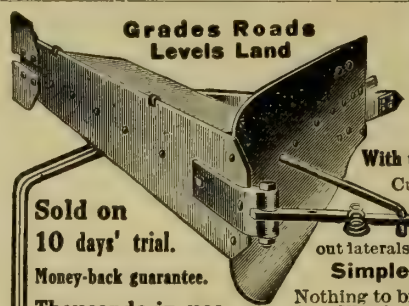
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In the other there are two hundred acres, all fenced, good brick house. Practically all seeded in alfalfa. Some of it, one two and three years standing. Individual water right. Plenty of water.

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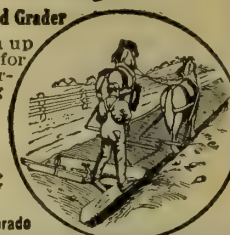
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Cuts V-shaped ditch up to 4 ft. deep. Fine for levee work; terracing; cleaning out laterals and bed furrowing.

Simple—Practical



Sedums are very attractive and stand more neglect than many other plants. Sedum acre, or "Love Entangle," will form a mat on the surface or hang over the edge of the box, while Sedum spectabile, "Old Hen and Chickens," will make little clusters of blue-green among other greens.

Another good group of plants for the window box is the Mesembryanthemums, or ice plants. There are several of these to be obtained, all of them more or less trailing in habit.

An attractive flowering vine that will thrive under conditions suitable for geraniums, and more particularly Coleus, is the nasturtium. This is grown from seed, and blooms through a long season.

Flowering plants to supplement the green of the window garden need to be grown elsewhere through at least a part of their existence and be brought in when in bloom. Winter bulbs, lilies, potted geraniums, and many other flowering plants may be supplied from time to time either from the florists or from a window in some less-used room where they are grown till nearly ready to blossom.

#### COMMON IMPURITIES IN WHEAT.

Rye, Corn Cockle, Kinghead and Vetch, Frequently Cause Loss to the Farmer.

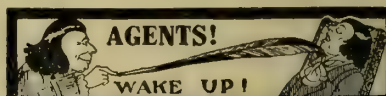
The value of good clean wheat has often been emphasized in this paper. The presence in wheat of more than 2 per cent of what are known to millers as "inseparable impurities" lessens the value of the wheat for milling and baking purposes. This is indicated by the results of recent tests made by the United States Department of Agriculture. This fact has been recognized in general commercial practice for wheat containing a noticeable amount of impurities brings a lower price per bushel than other wheat.

The experiments conducted includ-

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ADD ON BACK PAGE.



ed tests of the effect of rye, kinghead, corn cockle and wild vetch seed in wheat in various quantities. Of these substances, rye occurs the most frequently, being found in 83 per cent of the samples of hard winter wheat examined by the investigators and in 39 per cent of the spring wheat. In one instance a farmer's wheat crop contained 14.3 per cent of rye. On this account the farmer received 8 cents less per bushel than the normal price.

In regard to the quantity of rye necessary to exert an injurious effect upon the quality of wheat, there is a difference of opinion among millers. Some believe that when the percentage of rye is less than 5, the flour or bread is not noticeably affected, while others have held that 2 per cent is objectionable. The Government investigators found that 2 per cent or more of rye is sufficient to lower the quality of the bread.

In a considerable percentage of the wheat samples examined, the presence of rye was said to be due probably to the fact that the seed used in sowing the wheat contained rye. It is not infrequent for rye to scatter during harvest and to produce in this way a volunteer crop. If wheat is sown on land which was planted in rye the previous season, this volunteer crop of rye is harvested with the wheat. Partial winter-killing of the wheat increases the percentage of the rye, because the latter grain is not so susceptible to winter-killing as the former.

Corn cockle, although less frequent in wheat than rye, has a more injurious effect. The presence of even 1 per cent of this weed seed in wheat is likely to lower the price to the farmer, and certainly lowers the baking quality of the flour. Corn cockle is an exceedingly prolific annual weed a single plant having been known to yield as high as 2,500 seed. Furthermore, this seed is of such shape and size that it is difficult to separate it from the wheat. The weed is widely distributed over the United States and is especially abundant in sections producing soft red winter, spring, and Durum wheat. Every farmer, therefore, should strive to prevent its obtaining a foothold on his farm.

Corn cockle seed is particularly objectionable in wheat because it contains a poisonous element known as saponin or sapotoxin. This has been found at times to do considerable injury to young chickens and stock when fed in wheat screenings.

Of the other impurities examined, kinghead, sometimes known as great ragweed, is frequently found in wheat in quantities as high as 3 or 4 per cent. Under such circumstances the flour contains black specks and the color and texture of the bread are seriously affected. Even as small an amount as 1 per cent of kinghead seed is noticeable in flour. Vetch seed also alters the color of the flour, giving it a yellowish appearance as well as a noticeable odor of vetch.

As has already been stated, the presence of any one of these impurities is very likely to reduce the price the farmer receives for his wheat. Not only is the price per bushel usually less but there may also be a "dockage" charge. Dockage is a trade term for the amount deducted on account of the presence of foreign material from the gross weight of the wheat. For example, if a load of 50 bushels of wheat is found to contain

2 pounds of foreign matter per bushel, 100 pounds is deducted from the lot for "dockage." The owner is paid, not for 50 bushels, but for 50 bushels less 100 pounds, or 48 bushels and 20 pounds of wheat.

HOW ICE SHOULD BE STORED FOR COUNTRY USE.

Ice is a very perishable commodity, and, therefore, certain important principles must be considered in the construction of a place to store it. Investigators of the Department of Agriculture consider that there are four important things to be considered in order to keep ice well. These are as follows:

1. The ice must have a minimum of surface exposed to the air or to the packing material. This is most easily accomplished by piling the ice in the form of a cube. A mass of ice 12 by 12 by 12 feet exposes less surface than the same tonnage piled in any form less nearly that of a cube or of a globe.
2. The keeping of good ice depends upon the completeness of its insulation, whereby it is protected from external influences, such as heat and air.
3. Drainage is important, because the lack of it interferes with the insulation.
4. The ice itself must be packed so as to prevent as completely as possible the circulation of air through the mass. The more nearly the mass of ice approaches that of a solid cube, both in shape and texture, the easier, with good drainage and insulation, will be the keeping problem. The keeping of ice, then, depends upon the shape of the mass, its insulation, its drainage, and its solidity.

The ease and rapidity with which ice may be gathered depends upon the condition and location of the field as well as upon the tools used for doing the work.

If the ice field is covered with snow, the formation of ice will be retarded, as the snow acts as a blanket and raises the temperature, thus retarding the ice formation. If the ice sheet is sufficiently thick and snow falls upon it, the snow must be removed before harvesting can proceed; or if, on the other hand, it is desirable to increase the thickness of the ice after the snow falls, the field may be flooded and the snow saturated with water, which is allowed to freeze, thus adding a layer of snow ice. Flooding on small fields may be accomplished in either of two ways: By "overflowing," which consists merely in conducting water to the field, or by piercing the ice field here and there with a bar or auger, to allow the water to force itself to the surface and gradually to saturate the snow.

Snow may be removed from small fields, when necessary, by means of shovels, but upon large fields it will be economical to use horsepower scrapers.

Excursion Rates to Denver, Colorado Springs and Pueblo account National Western Stock Show January 17th to 22nd.

On January 14th and 15th the Salt Lake Route will sell Excursion tickets to above named points at greatly reduced rates. Tickets will be good for return passage until January 31st. For information and tickets see nearest Salt Lake Route Agent. adv.

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The 2-IN-1 interchangeable lid is a new feature in the washing machine business. You can rinse the clothes with the same power with which you wash them. SAVES ONE-HALF THE TIME AND LABOR.

The 2-IN-2 wringer swings into four positions. The rollers have the forward and backward motion as well as the swinging. The whole operation is controlled by one lever.

The lid can be removed from the washing machine and placed on rinsing tub as shown in the right hand illustration above, and the clothes thoroughly rinsed by the washing dolly. This not only insures a good job of rinsing but REMOVES THE LAST BIT OF DRUDGERY FROM THE FAMILY WASHING. The simplest constructed machine on the market. Equipped for gasoline engine and electricity.

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Keep a record of the farm business. Make an inventory of feed and supplies, machinery and stock at the beginning of the year. Know what the receipts are for the year.

The total expenses for the year.

There is a very easy way for you to do this, just follow the simple directions in this book and you can take an inventory and keep enough accounts to tell how much you made during the year. You can learn which department of your farming business is paying the most.

The book is printed on good paper. All you have to do is fill in the blank spaces, it is all planned out for you. Nothing complicated about it. Those who used it last year were well pleased. It is adapted to Utah conditions.

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## POULTRY

### TWO GOOD COMBINATIONS.

By Edwin Bricket.

Poultry keeping, by its very nature is much more profitable and accordingly more pleasurable, if allied with some other occupation. With almost every industry there is some by-product that is usually wasted. It is obvious that if we can turn this waste into a paying proposition we shall increase our income proportionately to the value of the article in question. What this waste is and the possible value of same when turned in the right channel depends, of course, upon the industry and the use to which it is put.

First, we will take up the combination of poultry with the small dairy. Those readers who keep two or more cows, and who make butter, know that unless the calves are raised, or pigs kept that there is considerable skimmed and butter milk wasted. Even if now fed to the calves and pigs, it can be more quickly turned into cash by feeding it to the poultry. Chickens will convert milk into flesh considerably quicker than either calves or pigs, and the price received is noticeably higher, so you see the argument is on our side here.

If ducks are considered, the argument is all the stronger, for ducks grow much faster than chickens, and they seem to thrive even more on the milk diet. If those small farmers who keep from three to nine cows, would raise one calf to every two cows, raise only the pork for home consumption, and feed the surplus to poultry, making butter instead of selling milk, they would be better off. The farmers would have more money, and if properly managed the work would be no harder than now.

When the wear and tear of road equipment, time of team and man in delivery of milk, and all other necessary things are considered we think the balance is strongly in favor of keeping the milk at home. Many object to this on the ground of making the women's work harder. Why should it if the men use the time now spent in delivery, in making butter it would take no longer? There is room here for co-operation in butter making.

In feeding milk to the poultry, we like best to feed once a day in a mash, with either sour or butter milk. For growing stock we feed very little wet mash. If we have more than they can use in this way it is a paying "investment" to put the surplus in clean dishes, always in the shade, where they can drink it at their own will. When given to laying and breeding stock this is the better plan. Its fault, if it can be called a fault, is in the fact that it is "mussy" making the fowls look bad, and that it requires care to keep vessels strictly clean and sanitary. Like many other good things it can be made a curse if wrongly used, or neglected.

I have found that milk is vastly superior to commercial beef scrap in poultry feeding. I know other poultry breeders who think the same as I do and who think enough of it that they pay as high as four cents per quart for butter milk to mix the daily mash for the chicks. I like buttermilk better than either the sweet skim, sour

skimmed or clabbered. The butter milk seems to either kill the diarrhea germ, or counteracts its effects at any rate.

It is dangerous to change from sweet to sour, or vice versa. Use one and stick to it. In giving it to newly hatched chicks to drink, I prefer the sweet, but wait a week or two before beginning on the butter milk, after giving sweet milk. (Milk seems to be the natural food for the animal kingdom, and while the wild fowl certainly did not have it on the menu of the ancestors of our domestic pets, still it is an indisputable fact that our birds do thrive on it as on nothing else that supplies the animal food necessary for their proper development.)

Laying hens given sour or butter milk to drink lay more and larger eggs than when deprived of its use. When this by-product can be had for simply the work involved in feeding it surely is a very profitable use to make of what is now in many places simply a waste. Several years with and without it have taught me something of its worth, and I think too much is seldom claimed for it in this line.

Above we have seen how a farm by-product can be profitably used in connection with poultry keeping. Now we will see briefly how a poultry by-product can be just as profitably used on a farm or suburban home or in a back city lot.

It is surprising what a quantity of droppings a small flock of hens will accumulate in a short time. If not put to use these are of course a disgusting nuisance, but to those who own the place where they live they may be made to preform a very important service. Where the poultry keeper is a renter it is possible to use in the same way, if conditions are such as to warrant an extended residence. If neither of these conditions are possible, then one is often able to sell the manure to the owner of a garden, orchard, or berry patch.

In many places the unadulterated sells for \$1.00 per barrel. This is quite a help toward the feed bill, but if it is worth that much to one man, it surely is worth as much to another if put to the same use, and why not see that "the other" is the owner of the fowls? This same waste is the best possible fertilizer for the general garden when rightly used. It must be carefully used, however, and must be well rotted. Never used "green," are it will surely burn up the roots of the plants if used at all liberally.

Another place where the two form a "mutual benefit society" is in the orchard. Fruit bearing trees are greatly benefited in being used as a poultry run. The droppings fertilize the soil, the hens help by scratching around the roots, of established trees, not young ones, and by destroying quantities of harmful insects, and the poultry is benefited by the shade. The owner comes in here as a silent partner, making a third happy stock holder, by doubly benefiting through the combination.

It is possible for many poultrymen to have the possibilities of both these combinations, poultry and fruit,

(Continued on page 15)

## The Perfection of Union Pacific System Service



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As a consequence, the Union Pacific System has been brought to a state of operating regularity—the effects of which are felt through every channel of the service; the work goes on from day to day, and the public is assured of the full benefits resulting therefrom—

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The Home of the Western Prize Herd  
My winnings at Idaho State Fair 1913, were 13 first, 3 seconds, champion boar and sow, and champion fat barrow  
At a Tri-County fair held at Jerome, Ida., I took all but one second. I have anything wanted in Chesters from a weaning pig to a champion boar or sow at prices all can afford. High class stock. Write me.  
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Foundation Stock in Holstein Fresian's and Duroc Jerseys. Will exchange a few for hay or grain. For breeding and particulars write  
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1 Registered Jersey Bull 2 year old. 7 head cows and heifers—4 milking. Good grade, well bred from the best milk and butter family of the U. S.  
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Kaysville Utah

CHEAP AT \$100,000  
TAKE IT FOR \$25,000

160 acres joining town of Garfield and A. S. and R. smelter, on three railroads, 16 miles from Sat Lake City, can plat 300 building lots. Garfield is bound to grow. Balance of land contains millions of tons of lime rock, thousands of tons will go 50 per cent and better, fine for fluxing. An immense body of lime, will make best cement in Utah. American Smelting and Refining company owns thousands of acres and the land surrounding this. A big snap at \$25,000.

Have \$50,000 equity in first-class, improved downtown property paying 9 per cent net for sale, or will exchange equity for other property.

Improved business property on Broadway; fine location, good interest on investment. This property is bound to advance. Cheap at \$40,000.

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8 acres—part of the old Central Experimental Farm. Only ¼ mile from Lehi, Sego Lily School and Lehi 4th ward meeting house. A farm on edge of Lehi City Limits. 360 apple trees. Prunes, currants, and gooseberry trees.

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Lehi Utah

OUR NEW YEAR'S GIFT—

We have recently purchased 500 subscriptions to the Duroc Bulletin to present to the progressive hog breeders of the inter-mountain states. That paper is the official organ of the Duroc Jersey Association.

Would you like one—Send us your name and address today—it will cost you nothing and you will not be obligated to us in any way.

We want you to know the best in hogs.

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10 AND 20 CENTS.

121 East 2nd South  
SALT LAKE CITY, UTAH.

TWO GOOD COMBINATIONS  
(Continued from page 14)

or poultry and the dairy. It is not necessary that either be carried on largely, but it is not impossible for the average fruit man, dairyman or poultryman to profit by the combination. The gardener is not out of the list, in fact he is in a fine position to stand at the top. No branch of farm industry but that can be made more remunerative by adding poultry keeping, which may mean only the keeping of a half dozen in the back lot, and no one raising poultry but may be benefited financially if in no other way, by adding fruit, garden, or cows as a balance.

RURAL CREDIT AGAIN

F. B. Mumford.

Interest on real estate mortgage loans may be reduced by the torrens system. "The farmer, like every other business man, should reduce the interest rate paid on his borrowed capital to the lowest possible point." Numerous plans for accomplishing this by state and private aid have been advanced, but many of them are omitting the Torrens and similar systems of land title registration which will reduce the expense of obtaining land mortgage loans. After all possible help has been secured by other means, there will still be the possibility of obtaining further relief by this system if it has not been adopted.

Either this system or some similar system, is in use in Germany, Austria, and France; so they can be said to agree on this point, whether on others or not. Under these systems, the expense of abstract of title and of the inspection of titles by lawyers when land is sold, or a loan is secured by a

mortgage, are avoided. Only the recorder's fee is paid and there would be no occasion for securing an abstract of title, having the lawyer inspect the title, or having a title guarantee company insure your title.

Every land owner would be practically in the position of holding an original patent from the government, and there would be no possibility that he would lose his title through any earlier faulty transfer as in case of failure to secure the proper written consent of the heirs of the estate. In case the government has made a mistake which deprives the heirs or others of land which rightfully belongs to them, it makes good the loss from a fund obtained by levying a very small tax at the time of registration. In Australia, where the Torrens system was instituted in 1857, a tax of about one-fifth of one per cent of the value of the land has taken care of this part of the work. In other words, it would seem that mistakes were made which necessitated such a payment for about one for every 500 farms registered. Naturally, there will be fewer compensations of this kind to be paid after the system has been thoroughly established than at the first, and the system can be established more readily in such new countries as Canada which has it just across our border, than older countries like England; yet in the county of London, England, between 1899 and 1909, 319,300 such registrations took place as compared with only 4,235 separate titles during the period proceeding 1895 in both England and Wales.

Anything which will simplify, cheapen, and make more secure the handling of titles will be a great blessing. The Torrens system and similar systems are practically as cheap as those whereby stock and bonds are registered on the books of the company issuing them and regarded as the property of those in whose names they are registered.

"De world owes every man a livin'," said Uncle Eben; "but he's got to claim it."—Washington Star.

When you laugh at the poor you may be only demonstrating what will happen to you some day.

When a man puts a price on him self he can always be bought a good deal cheaper.



# JERSEY BULLS

## BARGAIN PRICES

## REASON WHY

We have sold our Westover Farm located near the new sugar factory at West Jordan and must move our live stock. We are not going out of the Jersey cattle business. At our other farms we only have room for the cows, and you know at this time of the year it is no easy matter to make changes such as are necessary in the selling of our Westover farm.

We propose to give you the benefit of a reduction in price rather than an increased expense of finding and making a new home for several Jersey bulls we now own.

For reason given you can see that we must act quickly in the matter as the new people are to take possession right away. We did not plan to sell only part of these bulls but this sale has made a new condition. Our past record for high class animals is proof that we will only offer the very best. They are the Register of Merit quality.

## CHANCE MAY NOT COME AGAIN

for you to buy superior quality of animals at prices we offer in order to sell them before we have to move. Remember these prices we now offer are only good until we move.

CLAIRE'S EMINENT MAJESTY, dropped August 4, 1913. We paid \$500.00 cash in Chicago for the dam. Said to be the handsomest cow ever brought to Utah. A great producer. Comes from two of the greatest producing families, Eminent and Majesty. We sold his half brother for \$300.00 and was not a bit better animal but we must make these changes and offer this choice bull for \$150.00.

LOTIFEH'S OXFORD VICTORY, dropped Nov. 9, 1913, solid color; sire, Oxford Victory; dam, Lotifeh, who gave 7845 lbs. 9 oz. milk making 436 lbs. 9 oz. butter in year. While this record needs no apology, we are sure this cow is good for better than 500 lbs. butter in a year. This bull is rugged and vigorous and will give satisfaction. Ready for light service.

The Others Will Range in Price From \$75.00 Up to  
\$150.00

QUINTUS' VICTORY OF WESTOVER, solid color, dropped Nov. 29, 1913, sire Oxford Victory; dam, Marion Quintus, a beautiful cow imported from the Island of Jersey. She cost us \$525.00 and is worth it. Though she was brought from sea level to this high altitude and is considerably past her prime, she has just finished a year's record of 423 lbs. 15 oz. of butter. We sold this calf's full brothers to a discriminating buyer for \$200.00. This fellow is just as good as his brother, but is not brother for \$300.00. Claire's Eminent Majesty is just as good an animal but we must make these changes and offer this choice bull for \$150.00.

KATHIE'S OXFORD VICTORY, dropped March 24, 1913, sire Oxford Victory; dam, Kathie of Milton, an excellent young cow with large udder and teats; and a persistent milker. She was sold just after this fellow was born and was therefore not officially tested, but we are so sure that she would have made the Register of Merit that we do not hesitate to recommend this bull. To show what we think of him, we have used him on some of our highly bred heifers. Ready for hard service. Solid color.

BEE OF LILLYVALE'S NOBLE, dropped February 24, 1914, sire, Coullisse's Noble; dam, Bee of Lillyvale 2nd, now on official test and one of the most consistent workers we own. She was in poor condition when she started test, but will finish year with about 520 lbs. of butter to her credit. She is rather coarse in appearance, and her calf resembles her somewhat though he is not a bad looker. Solid color.

CHROMO'S NOBLE OF WESTOVER, solid color except little white at armpits, dropped Nov. 7, 1913, sire, Coullisse's Noble; dam, Chromo Miss of Lillyvale, who, though eleven years old, made 501 lbs. 7 oz. butter in one year. She is a very rich milker, averaging better than six per cent, and her calf from Noble should increase the butter fat in the progeny of any herd. Ready for light service.

FLORA'S NOBLE VICTOR, dropped April 6, 1914, sire, Coullisse's Noble dam, Oxford's Flora Adelaide, a young daughter of Oxford Victory. She is now on test, and though she was but 21 months old when she calved, gives every promise of beating 400 lbs. She comes from a line of producers. Her dam is Flora Adelaide, one of our best cows, who has a record of 610 lbs. 1 oz. of butter to year. It is not easy to find a calf with more production back of him than this fellow has, no matter what one is willing to pay. Solid color.

If you can not buy one join with your neighbors and secure a good sire for your community. All these animals have been tested recently for tuberculosis and are free from disease. The prices will include registration papers, tabulated pedigree, crate and delivery of animal to railroad station in Salt Lake City.

**THE IMPORTANT THING ABOUT THIS IS THAT YOU MUST ACT QUICKLY. IF YOU WANT FIRST CHOICE WRITE, PHONE OR TELEGRAPH TODAY.**

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# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region

OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE

VOLUME XII; No. 24

LEHI AND SALT LAKE CITY, UTAH

JANUARY 15, 1916



WHY DON'T WE RAISE MORE HORSES ON THE FARM?



# Some of The Good Things For 1916

WE have been promising our readers for some time that we would give them the best paper during 1916 we ever published. Things are working out so that we can give even better than we planned. The real value of a paper is in its helpful ideas, suggestions and inspiration that it gives to its readers.

Only a few days ago we made arrangements with President John A. Widtsoe of the Utah Agricultural College, and he is going to write an article each week for you. He is a very busy man but we showed him the amount of good he could do in a weekly message to the thousands of farmers in this state, and he has accepted of this added responsibility. President Widtsoe as a writer upon agricultural subjects is well known, not only in Utah, but Nationally.

Drainage is one of the great problems that the farmers of this state have to deal with. We are very pleased to announce that Mr. R. A. Hart Senior Drainage Engineer of the Western States for the United States Department of Agriculture will write for the Utah Farmer a series of articles on drainage. Many farmers already know the value of drainage, others may learn how helpful it will be to their farms.

The weekly agricultural lessons by Prof. J. C. Hogenson will be continued each week and if the ones already published are an indication as to what our readers are going to receive during this year we know they will be very valuable to you. Are you following them? They are just like a course in agriculture. Don't fail to read every lesson.

Farm machinery and the implements we use and should use on our farms will be discussed in a series of articles by Prof. L. R. Humphreys of the Agricultural College.

The Potato. How to improve our production. How to combat the disease that now interfere with the growth and development of this crop. These and other subjects that deal with the potato will be discussed by Dr. G. R. Hill of the Agricultural College.

A number of other well known writers will contribute to the Utah Farmer during the coming year but we are not ready to announce the details. Some of the writers we refer to will be Prof F. S. Harris, Dr. W. E. Carroll, Dr. E. D. Ball, Prof. Byron Alder, Prof. E. B. Brossard, Prof Wm. H. Homer, Uncle Ben R. Eldredge, J. W. Paxman.

The Home Department will continue to supply up-to-date material that will be helpful for the Farm Home. One series of articles in this Department will be by Miss Gertrude Tobiason on the "Care of babies" and "Health in the home."

From the above outline you can see partially what we are going to give to our readers. Other announcements will be made later and more details given.

The Utah Farmer is going to give you this year one of the biggest dollars worth of good reading you ever received.

Right now is the time to renew and tell your friends and neighbors about the good things in this paper for 1916.



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VOLUME XII.

LEHI, UTAH, SATURDAY, JANUARY 15, 1916

No. 24

## Organization and Planning For Operating a Dry-Farm

By J. W. Paxman, Extension Specialist in Dry-farming For the Utah Agricultural College.

The accompanying diagram is designed to give a concrete outline for the economic conducting of a developed dry-farm of 320 acres, under average conditions and where the land and climate are favorable for dry-farm practices, using horses as the motive power.

Under normal conditions the farm work can be accomplished comfortably within the limits outlined and the equipment need not necessarily be in excess of that named. Unless some unusual conditions prevail it is not necessary to invest in a great variety of farm implements as supposed by many of the farmers. Generally speaking there is altogether too much invested in equipment. Better limit the equipment and have the implements modern and kept in good shape for work.

If the diagram is studied carefully it will be observed that all the essential items that make for the production of a crop have been given consideration and due care given in providing against an undue waste of time, energy and money.

The object of this discussion is to provide against a woeful waste of time and losses sustained through improper management.

Let us discuss the items in the diagram somewhat in detail and determine whether or not, under proper management, the average dry-farm in the state ought not to pay returns equal to that of the average irrigated farm with a like amount invested.

### Organization.

Organization in the sense used here is synonymous to management and it is this factor in the conduct of our dry-farms that at present needs attention and that this article is aimed at. It means the bringing into beneficial and economic use of all our forces—our time, energy, equipment and resources of every kind—including our intelligence, and to so organize them that they will do the most efficient service with the least amount of outlay consistent with the income.

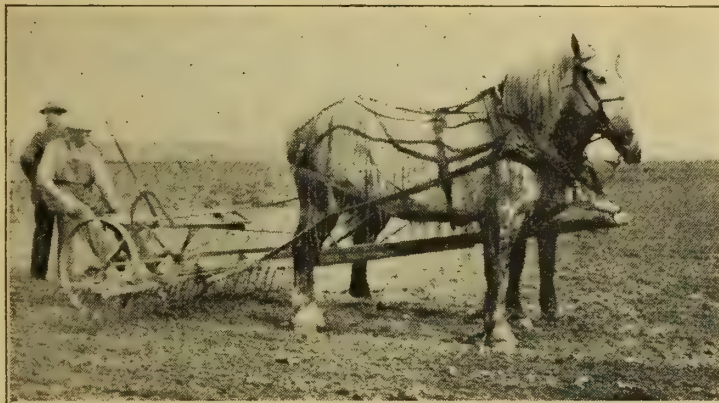
### Equipment.

The items mentioned under this heading provide for the utilization of horses and such farm implements as can be used to do the best service under average conditions, that is, where the land is reasonably free from rocks and other stubborn conditions, and is moderately free from side hills. In other words the equipment listed will meet conditions that obtain on three-fourths of the farms.

Four horses weighing 1200 to 1400 pounds each and in good flesh are

capable of drawing all the implements mentioned. However, it may better meet the ends of economy if the farmer would invest in the fifth horse and have three out of the five

ing) and harrowing 100 acres fallow, (25 days at rate of 4 acres per day).  
July 1 to July 5 Harrowing 60 acres fallow (3 days at rate of 20 acres day).  
July 5 to July 15, Recruiting forces, repairing, and preparing for harvest).  
July 15 to August 15, Heading 400 acres



brood mares, as in this instance he would not only have profitable returns in his costs; but would have an extra horse in case of sickness or disability of either of the other horses.

The prices named are the present retail prices and the items enumerated will meet all the requirements for efficient work on the farm if the "Program of Work" is followed.

### Organization for the Economic Operating of a 320 Acre Dry-Farm. 160 Acres Cropped to Wheat Each Year.

#### Equipment

Value of land, all in state of cultivation, 320 acre @ \$25	\$8,000
4 Horses 1200 lb to 1400lb.....	\$600
2 Work Harnesses for wagon.....	58
2 Work Harnesses for plow.....	37
1 Farm Wagon, 3 1/4 inch.....	120
1 Gang Plow.....	75
1 16 ft. Home-made Harrow.....	45
1 16 ft. Home-made Weeder.....	50
1 20 ft. Light Harrow.....	25
1-3 Interest in 12 ft. Header.....	85
1 Header Box.....	35
1 16 Drop Drill.....	140
Total cost of equipment.....	1,270
Total Investment .....	\$9,270

#### Program of Work

Sept. 1 to Sept. 30, Harrowing and Drilling 160 acres (20 days at rate of 8 acres per day).  
Oct. 1 to Oct 15, Plowing 100 acres stubble (30 days at rate of 3 1-3 acres per day).  
Nov. 15 to March 15, 4 1/2 months off the farm to earn feed for the teams, making improvements, repairing, etc.  
April 1 to April 15, Harrowing 100 acres fallow (10 days at 10 acres per day).  
April 15 to April 25, Harrowing 160 acres grain (8 days at 20 acres per day).  
April 25 to May 25, Plowing and harrowing 60 acres stubble (20 days at rate of 3 acres per day).  
May 25 to June 30, Cultivating (or plow-

for self and co partners (20 days at rate of 20 acres per day).  
August 15 to September 1, Threshing and storing or marketing crop.

#### Returns and Cash Expenses

Normal crop, 160 acres, 20 bushel to acre, 3200 bushel @ 75c	\$2,400
Help in heading 160 acres.....	\$ 96
Threshing @ 7c per bushel.....	224
Seed, 160 bushel @ 75c.....	120
Repairs and incidentals.....	100
Taxes (estimated) .....	75

#### CASH EXPENSES

Net Farm Income.....	1,785
Five per cent on investment.....	464
Labor Income, Man and Teams \$1,321 Or \$176 per month for man and Teams for 7 1/2 months.	

The gang plow can be one to the liking of the farmer, mouldboard or disc, of any make he prefers. Will say, however, that many of us in this section are procuring a four-disc gang, adjustable to two-discs for stubble plowing; then if the fallow land becomes too foul with weeds and volunteer for the weeder to effectually handle it, we use the four discs with the same power and give the fallow a light plowing—say 4 to 5 inches—just deep enough to effectually kill all the growing vegetation. In this instance this takes the place of the cultivating period provided for May 25th to June 30th.

The 16 foot harrow mentioned is in two sections of 8 feet each connected with a draw bar same as the light harrows. This is home-made and much heavier and more rigid than the common spike-tooth harrow sold by the implement houses. One harrowing with this is equal in value to three harrowings with the common

harrow, as it is rigid, heavy, strong, and literally "combs" the surface and does not "rock" over the ground as most of the light or harrows do. I will be glad to furnish description of this harrow to any who may be interested. It is, without question, the most efficient and economical harrow for our dry-farms, in smoothing the surface and giving a genuine cultivation that counts.

If weeds can be successfully eradicated by any cultivator, it can be accomplished with the home-made provided in this equipment. If this will not overcome the weeds and volunteer, then we would better make up our minds at once to give the ground a light plowing, as that will be the most effectual and economical way to handle the situation. The weed question is becoming a very menacing one and many farmers are induced to try first one implement and then another only to find that they have invested considerable money and spent much valuable time with inefficient implements and in the end find that the weeds still live, or enough of them to make a fairly good crop of seeds for the next year, and at a cost that far exceeded the cost of a shallow plowing.

The 20 foot light harrow is wood frame with light spike teeth but plenty of them. It has five sections and is light enough draft for four horses, and answers the purpose of harrowing the grain in the spring and also of preceeding the drill at seed time and following any cultivation of the weeder. It is inexpensive and will do good service, saving its price in time during one season.

A 12 foot header is capable of harvesting 500 to 100 acres so at least three farmers could each own a joint interest in the header. The price of a header—\$250—is too much to invest for only eight days use in the year. Like a threshing machine, this should be made to do service for several farmers. Where three purchase a header, one header box and wagon from each, together with their teams would furnish the equipment for harvesting. The binder is altogether too expensive on the ordinary dry-farm. The better method still, would be to consider the purchase of a 8 or 10 horse combine harvester. The writer is informed and has every reason to believe that the improvements to be made on such machines for this year will fully meet our expectations and furnish a means of saving at least half the cost of harvesting over the header. It now ap-

(Continued on page 6)



## DAIRYING

### THE VALUE OF THE PURE BRED SIRE IN THE DAIRY HERD.

LeRoy W. Hillam.

When looking over any of the average dairy herds of this state, one of the first and most striking things that is observed is the lack of outstanding individuals. As a rule the herd is composed of a number of mediocre cows with perhaps one or two good individuals thrown in for good measure.

The next striking feature is the lack of uniformity of these mediocre cows in regard to shape, size, and color, together with the poor quality of each animal. These same cows have no outstanding good traits and in many cases few particularly bad ones. They are just cows and taken as a whole, when put to a milk or butter fat standard for comparison, they are not even fair producers.

This poor quality of individuals is what the herd itself is. It is not the outstanding cow that makes the herd but only the poorer ones within it that give the herd its standing.

We often wonder why our herds do not improve as other people's have done. The question may easily be answered by: "What bull are you using?" The bull is easily one half of the herd and it is the bull that will make or break any dairy farmer in only a short number of years.

The bull is responsible for the herd production is soon as his heifers come into milk. He is also to be blamed for over one half of the poor conformations and poor producing individuals existing in the herd which he heads. In selecting a herd bull there are many points to look out for. First he should above all be pure bred, for such a bull has a definite type and breeding in him to which he will always breed true.

Second, if possible he should be a proven sire, i. e. a bull that has daughters in milk so that his effect on the production of his daughters can be determined and from his past record one can tell what he will do in your own herd. Third he should have production back of him in his pedigree. Any good, pure bred bull will increase the production of the average herd up to his own standard within a very few years and in some

cases he may even surpass that standard. A good bull should impart to his get just what he himself has and to some extent that which his ancestors have had by way of production. Fourth, he should be of good type and conformation. He should show plenty of capacity, constitution, and vigor, together with quality and ability. Above all he should be prepotent in order to transmit these tendencies to his off-spring.

The standard of production or the ability of a bull is measured by a comparison between the production of his daughters and the production of their mothers. Do not count too much on pedigree but try the bull out first. Together with production a good bull will usually put a sameness of type and uniformity in the herd that will make each individual cow outstanding.

In using the bull on the herd, the ordinary breeder must be careful and avoid inbreeding as very few breeders make this method of breeding pay. Endeavor to have the herd bull as little related as possible to the cows he is to serve.

A good bull crossed on ordinary cows will readily show his value in the first cross and in practically every case he will increase the production of his heifers over that of their dams. A very striking example of this is shown in the following table. The Guernsey bull Bosky 9925 owned until recently by the Utah State Prison and perhaps the first Guernsey bull in the state has increased the production of his get over the original cows in the herd of which he was the head.

#### Production of Milk in Pounds.

	1912	1913	1914
Dan Sweetie.....	5120 lbs.	5490 lbs.	6741 lbs.
Get Bosky's Salome.....	11 mo. 6530 lbs.	11 mo. 6118 lbs.	9 mo. 6720 lbs.
Sweetie's Fawn.....		10 mo. 7391 lbs.	11 mo. 8485 lbs.
Sweetie's Cinderella.....			12 mo. 8300 lbs.
Dam Lola Stanley(died).....	7 mo. 4242 lbs.		
Get Lolita Stanley.....	11 mo. 8965 lbs.	11 mo. 8959 lbs.	11 mo. 12204 lbs.
Lola's Wanita.....	8 mo. 5659 lbs.	11 mo. 6626 lbs.	11½ mo. 7881 lbs.
Lola's Maple Leaf.....		2½ mo. 1846 lbs.	12 mo. 6842 lbs.
Dam Larena Stanley.....	9 mo. 5617 lbs.	12 mo. 5418 lbs.	8 mo. 2240 lbs.
Get Lenda.....	10 mo. 5827 lbs.	9 mo. 3759 lbs.	9½ mo. 5912 lbs.
Ruby of Utah.....	12 mo. 9504 lbs.	11 mo. 6461 lbs.	7½ mo. 8329 lbs.
Marion B.....	11 mo. 8168 lbs.	7 mo. 5043 lbs.	12 mo. 9111 lbs.

This record plainly shows the increase of production of these cows over that of their dams. They are also larger, of finer dairy type, and show more quality all the way through than their mothers and far exceed them in money value.

Never use a cheap bull at the head of a herd as he will deteriorate the value even of the average cows by decreasing the production. Always value a bull as one half of the herd and you will always have a good bull. Have a fixed type in mind and breed to it but be careful of inbreeding. Trade your old bull for a while for another good animal and get new blood into the herd. Do not sell a bull because he is getting old he is just as valuable to you as a young bull. As long as a dairy bull is useful he should never be butchered no matter what his age is.

#### Table Showing Effect of Herd Bulls Used at Missouri.

No. 1	Dams	Daughters
Average milk yield	5380 lbs.	4381 lbs.
Average butter fat Per Cent	4.35	4.93
Average yield of fat	234 lbs.	216 lbs.
No. 2		
Average milk yield	4969 lbs.	4576 lbs.
Average per cent fat	4.66	5.49
Average yield of fat	231 lbs.	245 lbs.
No. 3		
Average yield of milk	4559 lbs.	5969 lbs.
Average per cent fat	4.85	4.81
Average yield of fat	221 lbs.	287 lbs.
No. 4		
Average yield of milk	4775 lbs.	8005 lbs.
Average per cent fat	4.97	4.80
Average yield of fat	238 lbs.	384 lbs.
No. 5		
Average yield of milk	5321 lbs.	5376 lbs.
Average per cent fat	5.04	5.04
Average yield of fat	268 lbs.	171 lbs.
No. 6		
Average yield of milk	6039 lbs.	4295 lbs.
Average per cent fat	4.86	5.05
Average yield of fat	293 lbs.	217 lbs.
Reference:—Dairy Cattle and Milk Production—Eckles.		

The above tables show the effect of the sire upon the herd. In four of

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the above cases the sire was helpful and increased the production of the daughters over the dams. In two cases inferior bulls were used with the result that the production of the daughters was less than that of the dams.

If the proven, pure bred, sire will improve the production of the herd and will raise the monetary value of the cows within the herd will it not pay to use a pure bred bull?



# WATER FOR COWS—SHALL IT BE WARM OR COLD IN WINTER?

Elson and Ricks Dairy Bulletin No. 2 by Dr. W. E. Carroll.

The statement that milk cows should have free access to a generous supply of pure water is very good summer advice, but is not sufficient for winter conditions.

Large amounts of water are needed daily to keep up the body functions of the cow. This water leaves the body by evaporation from the skin, through the breath, and in the urine. In addition to this, if the cow is expected to produce milk, an additional supply of water is needed, as each 100 pounds of milk contains about 87 pounds of water.

Experiments have shown that cows milk normally drink 4 times more water than the same cows do under similar conditions when dry and not carrying a calf. It has been found by other tests that, on the average, a cow requires about 5 pounds of water for each pound of milk produced. Where succulent feed is given the water it contains reduces somewhat the amount necessary to be taken in as water. Too many winter rations, however, contain no succulent feed, so that all of this water must be drunk. A cow giving 25 pounds of milk should, therefore, drink about 125 pounds of water per day. Now, 10 to 60 pounds of ice water at one drink, when the mercury at best is only a few degrees above zero, would not set well on any stomach.

To force cows to do this is wasteful in three directions: 1. A certain amount of feed must be burned in the body in order to warm this water to body temperature. 2. When a cow takes this amount of ice cold water into her stomach, she is so thoroughly chilled, especially in this region, that the processes of digestion and milk secretion seem to stop almost completely for some time, and a considerable portion of her milk secretion is, therefore, necessarily lost. 3. The feature causing the greatest loss, however, is the fact that the cows refuse to drink enough of this cold water for high milk production.

It is considered good economy, especially with a herd of high producing cows, to warm their water at least to 60 degrees Fahrenheit. One man reports an increase of 10 per cent in the milk flow due to warming water for

his cows. On the other hand, cows seem to dislike water which is too warm. Between 60 degrees Fahrenheit and 75 degrees Fahrenheit will give good results.

## Methods of Warming Water.

**Natural.**—The best and most generally satisfactory supply is spring water which never becomes cold. If the spring is very far away it will probably pay to lay a pipe rather deep in the ground and bring the supply close to the barn, as cows dislike traveling very far for water in bleak weather. By keeping the tank drained out except at watering times, the cows can be given warm water. Water piped into the barn, unless the drinking devices can be and are kept strictly clean, is considered detrimental to the health of the cow.

**Tank Warmers.**—According to what is desired, a tank warmer can be obtained which burns wood, coal, or kerosene, or what is probably more convenient and less dangerous is an electric device. This can be fastened in the tank so as to keep the water at a drinkable temperature.

Lehi, Utah.

Utah Farmer:

Dear Sir:—I have a (3) three year old Jersey heifer. Her second calf was born 22th of last February. I feed her alfalfa all she will consume (4) four quarts of bran with scraps from the family table such as parings from vegetables and etc. What should I do to increase her flow of milk. She now gives 24 pounds of milk per day. An answer will be appreciated.

Answered by Dr. W. E. Carroll.

A three-year-old Jersey cow, nearly a year in milk, which gives 24 pounds of milk per day should not be required to increase her milk yield, as this is a very satisfactory showing. If the cow has been bred, care should be taken to dry her off successfully about six weeks before calving. The ration mentioned is according to the feeds available in the section, very satisfactory. An addition, to which the cow might probably respond, would be some roots or silage. These are not always available and the vegetable parings if plentiful enough are a pretty good substitute.

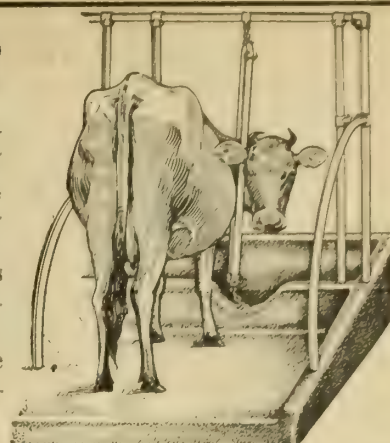
## Her Reduction.

Mrs. Brown (to Mrs. Jones, who

# Is This Your Cow?

Do your cows enjoy the comfort and freedom of flexibly hung, swinging steel stanchions, or are they cramped and miserable in rigid wood "stocks?"

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has been to see a son off in a troopship—"Well, I'm sure they'll be starting soon, for both funnels are smoking; and, you see, my dear, they couldn't want both funnels just for lunch."

A dash of lemon juice in water makes a pleasant and effective tooth wash, cleaning the teeth and sweetening the breath.

When the deep snow comes, the birds appreciate feed placed where they can get it easily. Suet tied to

trees or grain placed on boards or on pans off the ground will be visited by many friends that you perhaps did not know were here.

**Excursion Rates to Denver, Colorado Springs and Pueblo account National Western Stock Show**  
January 17th to 22nd.

On January 14th and 15th the Salt Lake Route will sell Excursion tickets to above named points at greatly reduced rates. Tickets will be good for return passage until January 31st. For information and tickets see nearest Salt Lake Route Agent. adv.

# High Class Jersey Bulls--Reasons for Selling at Reduced Price

Our Westover Farm is located adjoining the new sugar factory that is being built at West Jordan. We sold the farm and must move in a very short time. On this farm we had seven very fine Jersey Bulls, some of which we planned to keep ourselves. On our other farms we only have room for the cows. It was a question what to do at this time of the year so we decided to sell all seven of the bulls and make the price so low that they will go quick. The prices are from \$75.00 up to \$150.00 just about half the regular prices. In order to get these prices you must make the purchase before we have to move. Read our advertisement on back page of last week's Utah Farmer.

If you can not buy one join with your neighbors and secure a good sire for your community.

All these animals have been tested recently for tuberculosis and are free from disease. The prices will include registration papers, tabulated pedigree, crate and delivery of animal to railroad station in Salt Lake City.

**THE IMPORTANT THING ABOUT THIS IS THAT YOU MUST ACT QUICKLY. IF YOU WANT FIRST CHOICE WRITE, PHONE OR TELEGRAPH TODAY.**

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## Field and Farm

### AGRICULTURE LESSON.

Prof. J. C. Hogenson.

#### Crop Rotation.

##### Variety of Crops and Food.

Let us now consider the benefits derived from crop rotation; that is, by following one crop with a different crop, instead of growing the same crop year after year upon the same land.

In animal feeding, a frequent change of food and a variety of foods have been found very beneficial. No matter how complete and well balanced a particular food may be, or how well it may be relished at first, it soon becomes tiresome unless a rotation of other foods of sufficient variety and frequency is provided. Undoubtedly the prolonged use of a single article of diet without change will introduce substances, or will set up changes or conditions in the body which seriously interfere with its normal functions. A change of diet provides time and opportunity for the elimination of these objectionable products, and for the overcoming of unfavorable conditions.

Crop rotation is not much practised in the west. The same crop is usually grown upon the same land year after year, as long as it will grow at all. This is a great mistake in our agriculture.

#### System of Rotation.

The systems of rotation which have been practised and pronounced satisfactory under different conditions and in all varieties of soils, usually consist of (1) some crop which only partly covers the ground and which permits cultivation through a full half or more of the growing season; as corn, potatoes, beets, this is called the cleaning crop in that rids the land of weeds. (2) some leguminous crop, like lucern or clover, which favors the fixing of free nitrogen from the air; and this is called the manurial crop or fertilizing crop, because it adds nitrogen, (3) some crop like grain or grass, which completely covers the field. The grains and grasses fully use up both the nitrates and the other salts. This crop is called the exhausting crop. Any of these crops may be our money crop. The money crop should be grown as long as possible without injuring the fertility or bringing disease into the land. The leguminous crop also uses up foods but permits the production of more organic nitrogen. Cultivated or hold crops like corn potatoes and roots, while they consume the nitrates already in the soil, permit excellent facilities for the production in the soil of more than they use by changing them to available forms. It is, therefore, a rational practise to follow a cultivated crop with grain, in order to make use of the accumulated plant foods. Grain should then be followed with lucern or clover in order to accumulate a fresh supply of nitrogen from the atmosphere. Finally the leguminous crops should then be followed with a crop that we grow for the plant itself and not for its seed.

#### A Rotation.

First two years lucern, third year potatoes or corn, fourth year wheat, fifth year sow again to lucern.

#### Experiments in Germination.

Two very instructive experiments

can be performed illustrating first, the germinating power of seeds, and second, the proper depth to plant seeds of various kinds.

To test the germinating power or vitality of seeds, take two common plates; upon one put a little sawdust and over this place a piece of flannel. Thoroughly moisten the sawdust and flannel. Now count out 100 seeds of the variety you wish to test just as they come, poor and good alike. Place them on the wet flannel and cover with another piece of wet flannel. Put the plate over this one, and set it in a moderately warm place. After 48 hours, count and remove all the sprouted seeds. Do this each day for five days. After this time, all the seeds that will sprout will have done so, and the percentage of germination can be calculated. It will be necessary to add water from time to time so as to keep the flannels and sawdust damp. Good seed should have a germinating power of from 90 to 98 per cent. To test the proper depth to plant seeds, fill a tall bottle with soil and place seeds at various depths such as 1, 2, 3, 4, 5 and 6 inches. Place them near the glass, so their progress may be seen through the sides. Wrap the bottle in black paper; which should be taken off only when examining the seeds. The paper keeps out the light, so that the seeds will germinate naturally and the resulting plantlets develop normally. As the plants progress, the experiment will readily show what depth of planting produces the best plants.

### ORGANIZATION AND PLANNING FOR OPERATING A DRY-FARM.

(Continued from page 3)

pears that there is a boon in store for the future in the matter of reducing the cost of harvesting on the smaller farms. This office is being fully advised on progress and will be able to give valuable data in the near future.

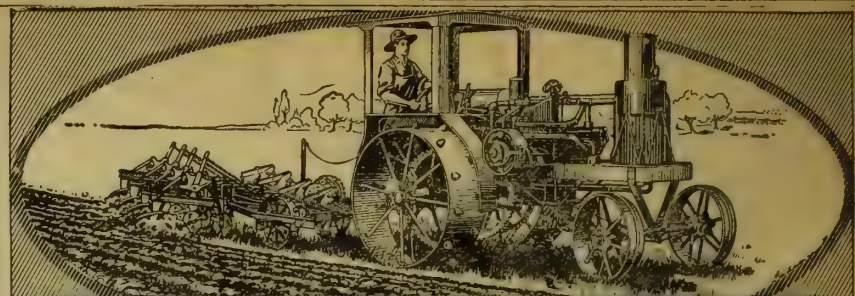
The drill should be a 16 drop, 7 inches apart, so as to utilize our power. It should be a good shoe drill or a double-disc of a good make and provided with press wheels.

We have shown then that the entire equipment need not necessarily cost more than \$1270, and too, the equipment should be and can be good and ample to meet the requirements. It is folly to attempt to properly operate a dry-farm without adequate equipment. There are far too many farms in the state that have paid for equipment two and three times this amount, or proportionately so, and then are materially deficient to meet the demands of good practices.

#### Program of Work.

It is perhaps in this item more than any other, that most of the farmers lose out. Why not put a value on time when working for ourselves as we do when working for others? Benjamin Franklin has said: "Dost thou love life? Then do not squander time, for that is the stuff life is made of."

To make the best of our time we must plan our work and plan ahead. Who are there that control the time of others with a view of accomplishments, but provide wisely for the exercise of that time? All important things in life are accomplished by planning ahead and utilizing time.



## Start Tractor Farming

### Bigger Crops—Less Expense—Easier Work

A TRACTOR gives you the power you need to practice best farming methods, plow deep and do all your work in the right way at just the right time, which means bigger crops. Gives you power that doesn't need to stop for rest—power that hot weather and hard ground can't stop—power in a concentrated form that one man can handle. You can't turn a switch and stop a horse eating. But a tractor stops eating when it stops work, and when it is working it costs you less than to feed enough horses to do the same work.

### There's a Size Avery Tractor to Fit Your Size Farm

Avery Tractors are built in sizes to fit any size farm. They have sliding frames, double drives, two-speed gears, low speed heavy duty tractor motors, extra large crankshafts, renewable inner cylinder walls, no pumps or fan.

Prices: They are sold at low prices as follows: 3-Plow Tractor, \$760 cash; 4-Plow Tractor, \$1120 cash; 5-Plow, \$1680; 6-Plow, \$2145; 8-10-Plow, \$2475. Avery "Self-Lift" Plows and "Yellow-Fellow" Threshers are also built in sizes to fit any of above size tractors. We

also build a special smaller size tractor for \$235 cash. All built and backed by an established company owning a large factory and many branch houses which insure permanent and prompt repair and expert service.

Write Now for New, Free, 1916 Avery Tractor, Plow and Thresher Catalog and learn all the facts about Tractor Farming, Threshing, Road Building, etc., with an Avery Outfit.

Avery Company, 2569 Iowa St., Peoria, Ill.

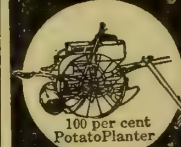
Ask for Address of Nearest Branch or Jobber

# AVERY

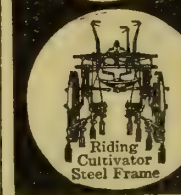
## "One Man Outfits" 6 Sizes Fit Any Size Farm.



Combined Drill and Wheel Hoe



100 per cent Potato Planter



Riding Cultivator Steel Frame

### Profit Makers

A GLANCE at Government reports shows how great a factor potatoes are becoming in Middle West production. Growers know that modern tools are necessary for satisfactory profit. Last year's crop is nearly 60 million short. Seed will be scarce and high. We have a Potato Planter that puts one piece in each place and one only.

### IRON AGE

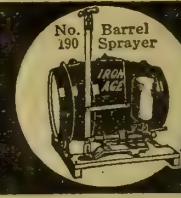
Potato machinery, garden tools, spraying machinery, etc., are built to give profit making service. Almost any combination you can think of in each line. Eighty years of factory and farm experience behind their manufacture.

Ask your dealer to show them and write us or our representatives: Utah Implement-Vehicle Co., Salt Lake City, for separate booklets fully describing lines in which you are interested.

Bateman Mfg Co. Box 836 Grenloch, N.J.



Seven-and-a-half foot Weeder



Barrel Sprayer



Horse Hoe and Cultivator

Wheel Hoes  
Garden Seed Drills  
Potato Planters  
Weeders & Seeders  
Riding Cultivators  
Walking Cultivators  
Potato Sprayers  
Bucket, Barrel and Power Sprayers  
Potato Diggers  
Cornstubb Cutters  
Fertilizer Distributors  
Row Makers  
2 and 4 Row Markers  
Corn, Bean and Pea Planters  
Asparagus Ridgers  
Land Rollers

The immediate thing in view for the farmer is the crop. Why not plan a way to make that crop sufficient and sure? It takes thought, care, energy, diligence, money, and the expenditure of time. Why not incorporate all of these in our plans in such a way as to give the utmost returns and the minimum amount of waste? I have asked of farmers all over the state whether or not they sat down and figured out a plan for their farm work for even six months ahead, and to my astonishment, not one in a hundred had attempted such a thing. What a woe! lack of management! Time for work is just as much an essence as the work itself in dry-farm practices, and to succeed as we should, we must plan a year or two ahead.

The "Program for Work" given in this chart contemplates an allowance for mishaps, delays, showers, etc. It will be noticed that 20 days only in

## SEEDS

FOR FALL PLANTING  
Rye, Turkey Red Wheat,  
Vetch and other Farm  
Seeds

DON'T FORGET  
THE FLOWER GARDEN  
Ask for Free Fall Bulb and  
Seed Catalog.

PORTER-WALTON CO.  
Salt Lake City.

each month, or 5 days each week or 8 hours each, is counted on for actual work on the farm, the other 5 or 6



days in the month being allowed for legitimate delays, such as hauling feed and water for teams, repairs, misfortunes, etc. Also, that the minimum amount of work for the 8 hours is figured on. For instance, the program calls for 3 1-3 acres per day for plowing, when the 8 hours ought to accomplish 4 acres; harrowing 10 acres per day when in reality 20 acres can be harrowed in the time.

Ample time is allowed for the work and sufficient work provided to properly take care of the farm requirements under approved methods for the conservation of moisture and providing for plant growth. The soil will get seven cultural operations, viz: plowing, harrowing, cultivating (or shallow plowing), harrowing, harrowing, drilling, harrowing.

It is understood, of course, that this schedule for work is necessarily flexible and can be modified to meet any local weather conditions. It can be moved forward where the spring comes early and downward where the spring comes later; but on the whole it can be relied upon as a very fair, but not infallible, guide for all work. The writer has worked on such a plan for years and has not found it necessary to deviate more than a week or two, and is certain also that the amount of work designated can easily be accomplished in the times specified, with a full day to spare each week for making trip to and from the farm, ten miles distant, and to haul hay and water for teams. The main secret lies in a well defined program, and to have the program in hand. It is a spur to action and lends inspiration to be up and doing. Besides its money in pocket and bigger crops to work closely to a program or schedule and to be prompt and on TIME with all the work.

Seed time and harvest, of course, are the more important items and must have first place in the program. The time for other work must be modified accordingly.

Returns and Cash Expenses.  
In the "Returns" we figure on what is a normal crop under average conditions, 20 bushels to the acre. We are taking wheat as the crop because it is the staple crop and will succeed, perhaps, as well as any crop, having proven to be the safest of all the dry-farm crops for the average farmer. It is advisable that the beginner confine his production to wheat until he gets experience, and even then to branch out onto other crops with caution and proceed in a limited way until he feels sure of his footing. Other crops may be grown on a particular farm with better profits but it is doubtful if an inexperienced farmer should undertake to grow them. Experience is

one of the vital factors in the successful practice of dry-farming.  
Fortunately for the man operating the dry-farm in conformity to this plan, the cash outlay for expenses (excepting that for horse feed, nearly comes at or near threshing time.  
The first item of \$96 is the farmers' share for the extra help the three owping the header would need to harvest 400 to 500 acres. The cash price for cutting and stocking a 20 bushel crop is \$1.25 per acre, and by a little figuring it will be determined that \$96 is ample to pay one-third of the help needed, apart from the three interested farmers and their teams. All other cash items are self-explanatory.

Conclusion.

It is clearly seen then that under proper organization, one man with modern equipment within very limited costs, can care for a 320 acre dry-farm; and under normal conditions, can obtain a very comfortable sum of money each year—a NET FARM INCOME OF \$1,785. Of course, he has the feed bills for his teams to deduct from this amount; but to offset this he has a yearly resource of 4½ months time in which to do work off the farm, baling hay, freighting, working on roads, hauling wood or posts, and numerous other things a thrifty man can find to do, to bring in the amount necessary to pay for all the horse feed. Again, should his teams be idle during the winter months, the straw from his threshing will feed them with a very little grain added. Even if we deduct the full price for horse feed for the 7½ months—50c per horse per day, we still have left \$1,335 net farm income, which is equal to \$178 for every working month FOR THE MAN. Not so bad, is it?

More than this, if the program as outlined is closely followed and the methods intelligently applied, it is not only possible, but very probable that the harvest would be nearer 25 to 35 bushels per acre, making the net income nearly double.

But the proper application of the methods and other essential factors are matters for other discussions. We have so many examples that show that our farms can, and will some day, produce more than double the net returns of the present.

The main purpose of this paper is to bring to our attention the necessity of ORGANIZATION—planning and managing our farm and work—so as to make the best use of the money, energy and TIME, with emphasis of the TIME, devoted to the farm; and to show that the investment need not be disproportionate to the income.

If all the dry-farms in the state were to receive the careful planning, economical equipment and the strict observance as to the time of performing the work as contemplated in this article, the industry would be on a far more stable basis and would be producing many millions of dollars more to the resources of the state and enriching our personal pockets.

Fellow Farmers: Are you planning your work a year or two in advance? If not, get at it now, before the winter passes, then when the season comes work to your plan. Is your equipment modern and adequate? If not, figure some way to make it so. It may not cost half what the increase for the first year would be. Put a little of the business" in your farm that a banker does in his bank.



**"My daddy wears the kind with the RED-LINE 'ROUND THE TOP!"**

# "HIPRESS"

**Brown and White Rubber Footwear**  
*The most wonderful footwear ever placed on the market!*

Ask for the "RED-LINE"



Made by a new process exclusively Goodrich—which permits use of same wonderfully wearing rubber—that goes into Goodrich Auto Tires.

Which welds the boot under enormous pressure into ONE SOLID PIECE! Like an automobile tire is made.

It cannot leak, peel, or come apart. It is yielding and comfortable. Shaped to the foot while it is working.

**BUT TO GET "HIPRESS" ADVANTAGES, YOU MUST WEAR "HIPRESS" FOOTWEAR. THERE IS NO OTHER MADE LIKE IT—YOU CAN TELL THE GENUINE BY THE "RED-LINE 'ROUND THE TOP."**

**The B. F. Goodrich Company**  
AKRON, OHIO  
*The Largest Rubber Factory in the World*

**THE BEST** \$45.00 strictly all oak tanned western Double Team Harness on earth with breeching and collars for



**\$36**

our new Catalog sent free

NAME tugs, 1½ inch. with three loops and patent buckle. Traces 2½ inches solid single ply, with cockeyes.

**THE FRED MUELLER SADDLE & HARNESS CO.,**  
1413-15-17-19 Larimer St.,  
DENVER, COLO.

## Costs No More To Eat This Good Bread

It's a treat for the whole family, where Royal Table Queen—"The Perfect Bread" is served. The loaves are large and crusty, and filled with health-giving nutriment. The flavor of—

### ROYAL TABLE QUEEN

"The Perfect Bread"



has taken years to produce. It is the last word in bread making. Every home should serve Royal Table Queen. It costs no more than home made bread, saves drudgery and gives added zest to any meal. Your grocer has it—fresh every day.

**An Honest Bread at An Honest Price 100% Pure**

## Royal Baking Co., Salt Lake City, Utah





Combined with the  
Deseret Farmer and Rocky Mountain Farming.  
Established - - - - - 1904

Entered as second-class matter in the postoffice at  
Lehi, Utah.

Published every Saturday by the  
DESERET FARMER PUBLISHING CO.  
LEHI, UTAH.

Subscription price - - - \$1.00 year  
Canadian and Foreign postage 50 cents a year extra.

#### OFFICES

All mail should be addressed to the Utah Farmer  
Lehi, Utah, Kirkham Building.  
Our office at Salt Lake City, Utah,  
is at 712 McIntyre Building.



New York Office 5th Ave. Bldg.  
S. E. LEITH, Mgr

Chicago Office Steger Bld.  
T. B. COSTELLO, Mgr.

St. Louis Globe-Dem. Bldg.  
A. C. COUR, Mgr

**Change in Address**—When ordering a change in the address, subscribers should be sure to give their former as well as their present address, otherwise the address cannot be changed. This is a matter of importance to you and to us.

**Advertising Rates**—The advertising rates will be sent upon application.

#### OFFICIAL ORGAN

Utah Horticultural Society, Utah State Dairymen's Association, Utah State Bee Keepers' Association, Bear River Valley Farmers' Protective and Commercial Association, Agricultural College Extension Department and Utah State Fair Association, Utah-Idaho Millers' and Grain Dealers' Association, Utah Fruit Growers Association.

#### OUR GUARANTEE

We guarantee every subscriber against loss thru dishonesty or attempted swindle by any advertiser in this publication. We do not attempt, however, to adjust trifling differences between the subscribers and honest, responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within thirty days from date of the transaction, and the subscriber must have mentioned Utah Farmer when writing the advertiser.

We are always in a turmoil about taxes. Not so much about the amount as that they do not seem to be levied according to the benefits received.

This is the time of the year when the farmer who owns a silo should be getting good returns for his investment in the way of increased milk flow from his cows, because of the silage he is feeding them. Talk with your neighbor who has a silo, and get some first-handed experiences.

During these extremely cold days see that the drinking water which you provide for your animals is sufficiently warm that they will not chill after drinking. Those who have flowing wells on their farms, have this problem already solved for the water from these wells never gets extremely cold. If it is possible, provide a way for your animals to have access to a flowing well during the winter.

#### HARVEST YOUR ICE NOW

How about putting away some ice for next year? It can be secured with practically no cost except the gathering of it. It only needs to be harvested. The cost of putting away ice and keeping it until next summer is so small compared with the advantages of having plenty during the summer months that every farmer should make the effort. Any cost in storing it is easily offset by the saving that the wife can make in foods that would otherwise be wasted during the summer months. The pleasure of

#### A LAW OF SUCCESS.

Receive the new year with joy and it will bring you joy. The things we receive are proportioned to the things we give. From effort comes success; from faith comes reality. This is an old truth, from which there are no real exceptions.

The farmer wins from the soil just what he puts into it. Does he till the soil much? Does he sow with care? Does he watch over the crop, and give it his deep attention? If he does all this, and more, his harvest is well assured, and, whether the winds blow, or the hail fall, or the sun beat down in heat, or the rivers run low, he will win success as the years pass by, and will find the earth a ready giver.

Above all, he must believe, with resistless strength, that if he does his work faithfully, well and intelligently, the earth will repay his efforts with plenty. To trust the earth and the Maker of the earth is in agriculture as in all other pursuits the first requirement.

Moreover, of all workers, the farmer must give the largest trust and, therefore, from the fireside of the farmer, where implicit faith in the dominion given man over the earth has been as an unalterable fact have come the great leaders who have thickened the thin blood of the world and accomplished the great deeds of mankind.

Farmers, trust the goodness of the earth—that it will repay, surely, and in due proportion, the efforts you give out.

having ice cream of your own make is worth while. Ice cream is now considered a healthful, and an inexpensive food. Our suggestion is that you put away some ice and that you do it right now, during this cold spell.

#### HOW WE CAN HELP YOU

In conversation the other day with a farmer, he told us that he was unable to find a market for his products. We asked him why he did not write us about this, as we often have inquiries for just such things.

At the present time we have a number of people who are inquiring where they can buy hay. If you have a car or more of hay, send us word and we will try and help you find a market for it. If you have a car of hogs, or if you and your neighbors together can make up a carload, let us know and we will try and find a market for you.

Don't be afraid to write to us, and tell us how we can be of service to you. We are always glad to hear from any of our subscribers.

#### NEXT SUMMER'S WATER SUPPLY.

We have been interested in securing some information in regard to next year's water supply. In some parts of the state we now have stored in the mountains more snow than we had at any time during last winter, and another helpful feature about this is that we have had considerable wind, and this had driven the snow into the gullies and ravines, which will hold it for late water in the summer.

In very few places are we troubled with a

shortage of water in the early spring. It is the water that we need for maturing some of our crops which concerns the farmers, and the prospects for the coming year are very hopeful.

Last year was so dry that it will take some of this moisture that we now have to make conditions normal, but even then, judging from the reports that are coming in, the prospects are good so that we will have plenty of water for the coming summer.

#### FARMERS SHOULD ORGANIZE.

One of the greatest problems that the farmer has is the question of working out a better marketing system. As it is today, it costs too much to get the farmers' products to the persons who actually use them.

It is a known fact that the middle-man, or commission merchant, at times make as much out of the sale of a farmer's products as the farmer has made in taking a whole year to produce it. Under the present conditions, it would be a difficult task to eliminate the middle-man, but there should be some way for a farmer to receive a greater percentage of the amount paid by the consumer for his products.

There is a lack of organization among the farmers. If they would get together and work together it would wonderfully help in overcoming this condition. The real producer is entitled to better returns. Many agents, commission men, and others who do not produce one thing, and have no capital invested, make more money from the farmer's products than the farmer does himself. Some day, in the very near future, the farmers are going to realize their conditions, and are going to get together for their own good and protection, and for the benefit of the buyer-consumer.

#### ATTEND THE ROUNDUPS.

Every farmer should make an effort to attend one of the Round-Ups and, if possible, take his wife along with him to attend the Housekeepers' conventions. The practical instructions, discussions, and demonstrations, for the various kinds of farming should interest every one sufficiently to take a few days vacation, and attend one of these round-ups.

At Logan this year practical courses will be given. The farmer who attends will have the opportunity of using 20 different laboratories. This kind of work will be done in the morning, while the afternoons and evenings will be given over to lectures.

Judging from the interest that is being shown, the Round-Up at Logan will be more largely attended than ever before. Those in charge of it are learning what the farmer needs, and what interests him, and in turn the farmer is learning that he can go there and take part in the discussions, and make the time spent very profitable in meeting farmers and learning of their experiences. This should be helpful to anyone.

The Round-Up at Logan this year commences January 24th, and continues two weeks. An opportunity that every farmer should take advantage of. It will do you good to get away from home two weeks, and the association with several hundred farmers from all parts of the state will do you good. Arrange your affairs so that you can go.



## DUCK BACK Harness OIL



### Preserves

the life and color of leather, saves repair bills and makes Harnesses last longer.

Buy a can from your dealer.

### Utah Oil Refining Co.

Refiners

Salt Lake City, Utah.

## Crystal Purity

Sugar made at home is 100 per cent pure. It is cheaper than the foreign kind. Table and Preserving Sugar is suited for the table, for cooking, baking, canning, preserving, candy making and other purposes.

ASK FOR TABLE AND PRESERVING SUGAR.

## Seed and Nursery Book for 1916

This up to the minute Guide Book is brimming full of just the useful information that you are looking for, as a user of SEEDS, SHRUBS, BULBS, TREES OR POULTRY SUPPLIES.

You are entitled to a FREE COPY.

Write or Phone for it TODAY.

## Porter Walton Co.

SALT LAKE CITY

### WINTER CARE OF BREEDING FLOCK.

It is very important that the ewes of the flock be put in proper condition before lambing time as otherwise the farmer or breeder can expect only a small percentage of lambs. There are two conditions that may result in the raising of a small percentage of lambs. First, many people have the impression that the ewes can be kept throughout the year on coarse rough feeds with no grain except perhaps a small amount after lambing. The result is that the ewes being thin at lambing time produce weak lambs and do not produce enough milk to keep the lamb alive for the first few days. The second condition, in which the ewes are too fat is far less common, but does occur. If the ewes have had the run of a good pasture during the summer, they may be in very high condition in early winter. Then if rather heavy grain feeding is started early the ewes may become too fat for best results. In any flock of great size, there is always much individual variation in the tendency of the ewes to put on fat. For this reason, it is often advisable to divide the flock, putting the fatter ewes together and feeding them rather light until near lambing time. The ewes thin in condition should be fed enough to bring them to good breeding condition before lambing.

If the ewes are in good breeding condition in the fall and a good quality of roughage is fed, no grain need be given until about three or four weeks before the beginning of the lambing season. The grain then given should consist of feeds that favor a good milk flow as oats or bran. A mixture of the two should prove very satisfactory. Up to the time of lambing, only about one-half to three-quarters of a pound per day need be fed.

After the lambing period, the amount should be increased somewhat. The proper amount to feed then would depend on the size of the ewes, the percentage of lambs and other factors.

The question of roughage for ewes is a very important one. Alfalfa and clover hay are almost essential if the very best results are to be obtained. Very coarse fibrous hays, especially timothy, have been shown to be very objectionable as a roughage for pregnant ewes. Some form of succulent feed as roots or corn silage can be used to very great advantage if the cost is not prohibitive.

The feeding should not be the only consideration in the management of the flock, but the questions of shelter and exercise are equally important. Close housing not only is not essential, but should be guarded against and instead a more open house or shed should be provided. Warmth of the house is not an important consideration for if kept dry, the sheep's fleece will serve to keep the body warm. Care should be taken that the sheep do not have to stand around in damp muddy places.—C. V. Singleton, Idaho Experiment Station.

Get busy on that plan for fixing up the school yard. Does it need a hedge or a few trees and shrubs for comfort and appearance? Talk matters over with the teachers and the older children. Pleasant surroundings at home or school pay.

# Beaverhead Valley

MONTANA

## Offers Wonderful Opportunities to Utah Farmers

Read the following which was printed in the Anaconda Standard, December 11, 1915. It is the Ranch we are now subdividing and selling.

### Montana Oats Sell at High Record Price

One of the largest sales of oats ever made in Montana was announced yesterday when the Beaverhead Ranch company of Dillon, one of the Penwell companies, sold to the Gould Grain company of Minneapolis 3,000,000 pounds of oats at \$1.15 per hundred. The total consideration was \$34,500.

These 1,500 tons of oats loaded in 50 cars will make two train-loads and will be sent East as fast as they can be loaded.

This is one more evidence of the fast-increasing prominence of Montana as a grain-producing state and the price received shows what enormous profits the farmers of Montana are making this year.

Get busy and see this property! Here is the country where you can make some money.

### Sold On Long Terms, Easy Payments

Railroad station, school house, telephone line on property.

Butte city affords highest priced market in the West.

Unquestionably the best opportunity for home-seekers now being offered.

For photographs and full information see

## Beaverhead Land Co.

516 Vermont Bldg.

Salt Lake City, Utah.

# A Great Magazine Offer

We have made arrangement with the publishers of Pictorial Review and can for a limited time make our readers an exceptional offer. With Pictorial Review you actually get four \$1.50 novels worth \$6.00 they will appear during 1916. One of them starts in the February number. "The Heart of Rachel" by Kathleen Morris. Serial stories are only one of the many good things that will appear in Pictorial Review. It is a high class, high priced magazine and we are very pleased to be able to offer our readers this combination. The time is limited and you must act quick if you want to take advantage of it. The price of the Pictorial Review is \$1.50 for one year, twelve big magazines. Utah Farmer for one year \$1.00 comes to you weekly. We make the exceptional low price of \$1.50 for both of these papers for one year. This offer is good to new or old subscribers. Old subscribers must pay up-to-date and one year in advance. Order today. Get the Pictorial Review and Utah Farmer both for one year for \$1.50 send your orders to Utah Farmer, Lehi Utah.



## THE HOME

PROGRAM FOR THE HOUSEKEEPERS' CONFERENCE JANUARY 24—FEBRUARY 5, U. A. C. AT LOGAN, UTAH.

### THE PRESERVATION OF HEALTH

Monday, January 24.

- 9:30 a. m. Registration.
- 1:30 p. m. (Chapel) Opening Address.
- 3:00 p. m. Human Health—Miss Gertrude McCheyne.
- The Digestive System (Illustrated Lecture)—Dr. W. E. Carroll.
- 8:00 p. m. Conjoint.

Tuesday, January 25.

- 10-12. Department Schools — Subjects of practical interest to the housekeeper.
- 2:00 p. m. Prelude—Musical program.
- Care of the Body—Gymnastics for women—Miss Mary Johnson.
- 8:00 p. m. Conjoint.

Wednesday, January 26.

- 10-12. Department Schools.
- 2:00 p. m. Prelude—Dancing.
- 2:30 p. m. Care of the Hair—Mrs. C. G. Warren.
- Demonstration—Modes of Hair Dressing to Suit Faces—Mrs. C. G. Warren.
- 8:00 p. m. Conjoint.

Thursday, January 27.

- 10-12. Department Schools.
- 2:00 p. m. Prelude—Musical program.
- 2:30 p. m. Functions of the Skin and How to Care for it—Mrs. C. G. Warren.
- 8:00 p. m. Conjoint.

## Sweeten Your Foods With This Good Sugar

With Utah-Idaho Sugar you may sweeten things to the taste and have the benefit of its high food value. The conditions under which Utah-Idaho Sugar is produced tend to make it an excellent article. It will stand the practical test of the housewife and the scientific test of the chemist. It is the sugar that passes a perfect examination under any test.

Ask your grocer for this perfect sugar; you'll be delighted with the results wherever you use it.

**UTAH-IDAHO SUGAR**  
ABSOLUTELY PURE

The Utah-Idaho Sugar Company recommends attendance at the Annual Farm and Home Conventions to be held at Monroe, Utah, January 19 to 22; Logan, Utah, January 24 to February 5; Cedar City, Utah, February 9 to 19.

Friday, January 28.

- 10-12. Department Schools.
- 2:00 p. m. Prelude—Recitation.
- 2:30 p. m. Care of the Feet—S. C. Baldwin, M. D. F. A. C. S. Orthopedic Surgeon to L. D. S. Hospital, Salt Lake City.
- Demonstration—Class in Swedish Gymnastics, Presented by Miss Mary Johnson.

Saturday, January 29.

- 10-12. Department Schools.
- 2:00 p. m. Prelude—Musical program.
- 2:30 p. m. Milk Sanitation.
- 8:00 p. m. Conjoint.

Monday, January 31.

- 10-12. Department Schools.
- 2:00 p. m. Prelude—Musical program.
- 2:30 p. m. The New Humanity—Dr. E. G. Titus.
- 8:00 p. m. Dance Program, presented by Miss Mary Johnson.

Tuesday, February 1.

- 10-12. Department Schools.
- 2:30 p. m. Demonstration—Miss Anna Barrows, Instructor in Home Economics, Teachers' College, Columbia, New York.
- 8:00 p. m. Conjoint.

Wednesday, February 2.

- 10-12. Department Schools.
- 2:00 p. m. Prelude—Musical program.
- 2:30 p. m. Sources of Infection in Children and Adults — Dr. Clarence Snow, Salt Lake City.
- Care and Combination of Food in Relation to Health—Miss Anna Barrows.
- 8:00 p. m. Conjoint.

Thursday, February 3.

- 10-12. Department Schools.
- 2:30 p. m. Demonstration—Miss Anna Barrows.
- 8:00 p. m. Address—Miss Anna Barrows.

Friday, February 4.

- 10-12. Meat Cutting Demonstration.
- 3:00 p. m. Demonstration in Cookery of Meats—Miss Anna Barrows.

Saturday, February 5.

- 10-12. Demonstration in Garnishing of Dishes—Miss Claire Parrish.

### DISHWASHING AND HOW IT SHOULD BE DONE.

Lillian M. Underwood.

I consider four things are essential to make the task of dishwashing easy. A large kitchen table, a quantity of good soft water, plenty of good soap and a large dish drainer. Some kitchens are too small to permit the use of a large table, but a folding shelf makes a good substitute. This shelf can be attached to the wall with hinges at a convenient height and let down against the wall when not in use. The dishes cannot be sorted and scraped rapidly unless one has plenty of table room. The majority of farm homes are equipped with large cisterns, so the question of water ought not to be a serious one.

I always fill my dishpan half full of water and if there are many dishes to wash I change the water when half the dishes are washed. Soap which makes good suds and does not injure

## GREATEST TWO WEEKS OF UTAH'S YEAR

JANUARY 24—FEBRUARY 5, 1916

Just at the time the Farmer and his Wife need a vacation.

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AND

## Housekeepers' Conference

AT THE

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Logan, Utah

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Progressive Farmers, Home-makers, Scientists on Utah Farming and Stock Raising which aggregate \$200,000,000 and on the various phases of Home Management.

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- How to Improve Methods of Marketing.
- Health and Sanitation in the farm Home.

### Opportunity will be given for laboratory work in:

- Floriculture—in greenhouse.
- Poultry—in poultry plant.
- Farm Repair Work and Horseshoeing—in shops.
- Veterinary Practice—in Veterinary hospital.
- Potato and Grain Diseases—in Botany laboratory.
- Judging Agricultural Products—in Agricultural laboratories.
- Home Nursing—in Women's Building.
- Dress making and Millinery—in Women's Building.

Registration Fee, \$1.00. Day Nursery in Gymnasium.

the hands is not easy to find at a small price, and as we need lots of good soap for dishwashing, the price of it is an item for us to consider. I have solved the problem by making my own soap from the meat leavings and grease. I make it as follows: To one 10-cent can of potash or lye I add one quart of water and allow it to cool. Then I melt the grease, of which I take five pounds. When the grease is just warm I slowly add the cold lye and two tablespoonfuls of powdered borax. I stir the mixture for about ten minutes and then pour it into the mold and several hours later I cut it into pieces. Any large dry goods box lined with heavy paper can be used as a mold.

This soap is white and makes a splendid suds which does not hurt the hands. I use this soap for laundry purposes and the men of the family prefer it to any other for washing their hands. I rinse my dishes in very hot water and fill the rinsing pan one-



third full. I dip each dish into this water before putting it in the drain to dry. When using a dish drainer it is very important to change the rinsing water whenever it looks soapy. "Necessity is the mother of invention," and such it was with my dish drainer.

During the rush or busiest times of

## Pattern Department

Full directions for making as the quantity of material required, accompany each Pattern. Price of each Pattern, 10c; no extra charge for postage. When ordering, all you have to do is to let us know your name and address, the number and size of each Pattern you want, enclose 10c for each pattern, and address all your orders to: PATTERN DEPARTMENT, THE UTAH FARMER LEHI, UTAH.



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the year on our farm I have to cook for several men and until last summer it seemed to me that I spent all my time wiping dishes and washing dish towels. One day I laid some small sticks on my table and spread a heavy cloth over them to catch the water. Then I rinsed the dishes carefully and set them there to dry and I discovered that when they were dry they looked better than those I had wiped. I found wire drainers in hardware stores, but these were too small, for each dish must have its own place in a drainer or the dishes will drip on each other and become spotted. So I had a dish drainer made as follows:

For a foundation I used the body of an old kitchen table about 2 by 3 feet and standing on legs about 30 inches high. One the top of the table six small sticks were nailed lengthwise. These sticks were a half inch thicker on one end than the other so as to give a slant to the tin which rested on top of them. This tin is the exact size of the top of the table with a narrow rim all around it to prevent water, which drips from the dishes, running onto the floor. At the lower end of this tin as it rests on the sticks there is a spout and under this spout I hang a small pail to catch whatever water that runs off.

I had a rack made of small sticks put crosswise. This rack is the same size as the tin and rests upon it. Around the outside of the drainer is a wooden rack against which to rest the dishes. I had it painted throughout, as this makes it easier to clean and protects the tin from rust, and I then put casters on the legs. When the dishes are finished the drainer can be put out of the way. I drain all my dishes, putting in the glass first at one end and reserving the other end for tinware. Of course I wipe the silver. I prize this dish drainer very highly.

In washing pans and cooking dishes a small sized vegetable brush is good and a mucilage brush is also good for washing cream pitchers and under the small handles on cups and tureens. A large sponge is also a fine thing in cleansing kitchen utensils and one will last for a long time. Of course any vessel, if washed as soon as possible after being used is more easily cleansed than when allowed to stand a while. Keeping the dishes and kitchen utensils clean is one of our most important household duties and one which we cannot neglect.

### BRINE CURE FOR PORK.

As soon as the carcass has been properly chilled and cut up, it is ready for curing. Rub each piece with salt, sprinkle a layer of salt in the bottom of a good, tight barrel, and over each layer of meat as it is packed in tightly. When the barrel is full, cover the meat with a board and weight it down with a stone so that none of the pieces can float with any part of the surface exposed to the air where it is likely to mould.

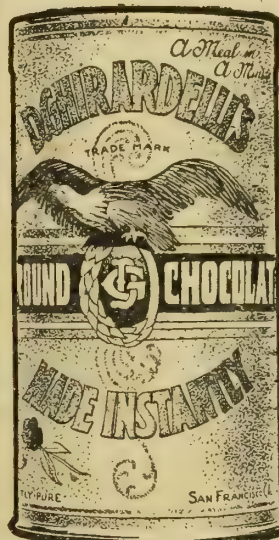
Make the brine by dissolving eight pounds of salt and two pounds of sugar in four gallons hot water. This will treat a hundred pounds of meat, and should be poured down the side of the barrel until the meat is thoroughly covered. Four or five days after the brine is put on, the meat should be repacked in another barrel in reverse order so that the pieces which were at the bottom will be on top in the second barrel. Brine should

be poured on as before, and the transfer to another barrel repeated in about five days, and this time it should be allowed to remain in the brine about a day and a half for each pound contained in the larger pieces of meat in the barrel, that is, a fifteen pound piece of meat should stay in the brine about twenty two and a half days, then it should be washed in warm water and hung up for smoking just as in the case of dry-cured meat. It should be smoked with hickory, oak, apple or any other wood except that belonging to the pine family until it suits the taste of the user. About twenty-five smudges make a good, mild smoke.

Many prefer not to use saltpetre or borax, and they should be used in small quantities if at all, for both tend to harden the lean meat, and saltpetre gives it a bright red color. Not more than an ounce should be used with each pound of salt. Borax helps to keep off the skippers, but this may be done by proper sacking. If used, it should be sprinkled lightly over the lean surface at the beginning of the curing or just after smoking, but not more than a tablespoonful should be used for a large ham.

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Write to Mr. A. L. Rice, Manufacturer, 158 North St., Adams, N. Y., and he will send you a free trial package, also color card and full information showing you how you can save a good many dollars. Write to-day.

Plain syrup, sorghum, or honey may be rubbed on the meat after either the dry salt or brine cure has been completed, and pepper may be added if desired. After it is carefully sacked so that the flies cannot possibly get in, it should be hung in a dry, airy place until needed.



## Questions and Answers

Utah Farmer:

Salina, Utah.  
A farmer has saved two acres of land well suited for the raising of carrots or mangels, but which would also raise a good crop of oats or barley which crop would pay best to raise for the feeding of dairy cows, also what amount of salt is generally used to salt a pound of butter or how much for, say 10 pounds of butter.

Respectfully yours,

G. Lorentzen.

Answered by Dr. W. E. Carroll.

Not knowing the conditions any better than the brief statement you give in your letter it is about impossible to give you any definite information. If other feeds are available for the dairy cow, one acre of ground yielding 60 bushels of oats or barley or 18 tons of carrots or mangels is valuable for the dairy cows in about the following proportion:

Carrots	4120
Mangels	3600
Barley	3132
Oats	1728

Of course, you must take into consideration the relative cost of raising these crops, and especially the adaptability of your ground to them. Also the cost and difficulty of storing the crops. The figures given being for the amounts mentioned actually fed.

The amount of salt to put in butter depends entirely upon the market requirements. The amount varies under different requirements from nothing

to as high as 2½ ounces for each pound of butter. Usually, however, from ¾ to 1 ounce per pound is satisfactory to most people.

If we can help you further kindly let us know.

Utah Farmer:

Will Sudan Grass grow on mineral lands. I have tried it on sand loam irrigated soil and cut two crops this last season and I expect to plant about five acres next spring. It makes a splendid feed either green or put up for hay.

Please state what grasses will grow on low mineral lands.

Respectfully,

J. S. B.J.

Answered by F. S. Harris.

We have never made any experiments on the resistance of Sudan grass to alkali, but it is doubtful if it would do well on low wet land as it is more of a drouth-resistant crop.

White sweet clover is probably the best forage crop available for low, alkali lands. Redtop and alsyke clover mixed make a good crop for wet land where alkali is not too high.

Stone, Idaho.

Utah Farmer:

Dear Sirs:—Will you please kindly state through your columns if there is any practical method of preserving or storing butter for a period of several months during the summer season?

Any information given will be greatly appreciated.

Yours truly,

A SUBSCRIBER.

Answered by Dr. W. E. Carroll.

Butter is stored in large quantities every summer for winter use. This is done in different ways, either in tubs, crocks, or prints. The first requisite is a good grade of butter, well washed from butter milk. The second thing necessary in a temperature at or below freezing. The butter should be down to this point from the time it is made until it is used.

Mapleton, Utah.

Utah Farmer:

Will you please outline the best way to plant and cultivate asparagus? Also how to prepare the seed bed?

Respectfully, M. K.

Asparagus will adapt itself to any soil or climatic conditions found in Utah, except locations which are extremely moist. Well-grown one-year or two-year old roots are preferable for starting the garden plot of asparagus. Before planting, soil must be well worked up so as to give a seed bed of at least 15 or 16 inches in depth. In planting, dig trenches three feet apart; loosen soil at bottom and dress well with decomposed manure; over this put a layer of two or three inches of fresh earth. The roots are set 18 inches apart, with crown eight inches below general surface of the ground. The crowns, however, should at first be covered with only two or three inches of soil, thus leaving a depression.

Cultivate enough to keep free from weeds and sucker growth. It is quite

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These mortgages are not sold, but they are placed in trust and bonds equal to their face value, bearing 5 per cent interest and secured by them, are issued and sold.

The money received from the sale of the bonds is then loaned at 6 per cent interest on first mortgages, which are also placed in trust, and bonds of equal value, bearing 5 per cent interest, are issued and sold.

This process is repeated until the Association has outstanding bonds equal to fifteen times the amount of its Capital and Surplus.

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The bonds of the Association, thus secured, will be one of the highest class bonds issued in the United States, and will enable the Association to secure money for its members at the lowest possible rate.

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a year will pay a loan from us, both interest and principal in 35 years, without commissions, renewal charges, or other expense, and you may pay off your entire loan any time after five years.

Under the present conditions you are paying 9 per cent, or \$90 a year for interest alone, and at the end of the period for which it was loaned you still owe the principal of \$1000. Under our plan \$73 a year will pay off a loan from us of \$1000, both interest and principal at the end of the time.

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necessary to cut all the crop during the harvest season to prevent its going to seed.

Asparagus will stand drought but not an excess of moisture. Consequently, just enough moisture must be given it during the summer time to keep it growing. It should be watered well in the spring before harvesting time.

NEED OF CO-OPERATION  
AMONG FRUIT GROWERS.

At the recent conventions of the State Horticultural Society the President, Mr. J. C. Knudson of Brigham City who was in Los Angeles could not attend the meetings. He sent a letter to the society and we give the greater part of it below.

"I fully realize that right now is the time when the society needs the undivided support of every fruit grower in the State. We have too much at stake in the horticultural industry in our fair State to entertain a thought of indifference in the welfare of the organization. Now is the time we need the society and every effort on its part to stimulate the grower and horticultural industry of the State, hence my deepest regret in not being able to be with you.

"The last season has surely been discouraging to the growers in some lines, particularly so with the peach growers, but I firmly believe that these conditions will gradually adjust themselves and the industry will show a marked improvement in the near future.

"Many of the dealers of the State who have been successful in the past and had prided themselves as being graduates along the line of marketing I believe came to a sudden realization,

after this season's work, that they knew little or nothing about the game. I, for one, am among that number. As a firm we have been very successful the past twenty years, but after the past season's run I awakened to a sudden realization that I still have very much to learn.

"It is to be regretted that the different dealers together with the associations and growers of the State cannot get closer together on the marketing of our fruits and produce in carload lots. There is no excuse for the cut-throat methods adopted by some of them this season. By closer co-operation this trouble can be overcome, insuring better prices for all even in seasons of over-production. These are matters, perhaps, that should not be brought before this convention.

"I have long felt that this association should be maintained solely for the purpose of promoting new features in the horticultural industry, and a meeting place for the growers where they can get together and exchange ideas and discuss the horticultural interests of the State, together with the many features connected thereto.

"I believe that it is the duty of the grower to not only learn to grow but to succeed in growing the fruits best adapted and most profitable as adapted to his or her section of the State. I am also firm in my belief that the growers should be taught and become expert in the grading, packing, and preparing of all the fruits they might grow for the market. This can partially be accomplished through this society, and just as soon as we learn to do this properly, better prices and better markets will prevail and the knotty marketing problems will have been solved. These thoughts bring to my mind the question of associations, much of this work might be accomplished through them. I want you to understand that I believe in co-operation and associations, but before results can be obtained through this source we have all got to get closer together and the associations conducted on a higher plane.

Gentlemen: We are all much to blame for present conditions. Don't try to shift the responsibility on the other fellow. Are you watching the interests of your own section; growing the fruits or produce best adapted to your locality and which will prove most profitable to you, or are you planting such fruits and produce as will cause you the least labor and care, irrespective of results? These are questions for your consideration. It is to be regretted that the State of Utah imported hundreds of cars of potatoes from adjoining states during the past season. The small town of Brigham alone, with the fertile lands of Bear River Valley right at their door, with acres and acres of peach orchards on soil particularly adapted for potatoes and with plenty of water for irrigation; shipped to that town this fall ten carloads of potatoes; and the potato question is but one of many similar that confront us. And while we complain of overdoing the industry the trouble lies in improper adjustment. All line of industry throughout the whole country meet with reverses; the cattle, sheep, and hog industry; dry farming; merchandising; in fact, there are none that I can think of at this time but what meet with reverses. True, they all become



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Go to your local dealer. Compare it on merit, by any standard. See the features that make the new "Z" the one best engine "buy" for you. When you buy an engine from your dealer you deal with a local representative of the manufacturer. He stands behind the engine he sells. He's responsible to you. He's at your service to see that you are satisfied. See the "Z" and you'll buy it.

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more or less disheartened but success comes to those only who battle on with an endeavor to bring their line to a higher standard. Let us all keep this in mind and struggle on and I am sure success will be our reward."



## POULTRY

### PRODUCTION OF

#### GUARANTEED EGGS.

By Dr. R. H. Williams.

There is a growing tendency for all persons engaged in any branch of business to turn out standard articles that will please the public. On this account, most producers are not only willing but anxious to guarantee the quality of their products. The breeder of purebred live stock, the butter maker, as well as persons making a speciality of selling seed, are all willing to guarantee their products as represented. In this respect, poultry producers have not been slow to realize the importance of not only producing good clean fresh eggs, but they make a practice of guaranteeing them. This plan is founded on a sound economic basis, which has proven especially successful throughout the whole country. The following may be considered the chief requisites to the production of high class eggs:

- (1) Good purebred birds.
- (2) Sound food.
- (3) Clean quarters.
- (4) Gathering the eggs twice a day in summer.
- (5) Keep the eggs in a cool place.
- (6) Market at least twice a week, or better, oftener.
- (7) Use a special container with the producer's name and guarantee.

#### Good Birds.

The kind of birds used is of great importance in the production of good eggs. Care should be exercised to select birds that are strong in constitution, free from disease and good layers. It should be an easy matter to select a special class of fowl for this purpose, as the strictly egg-producing breeds are considered best. It is a mistake to have a mixed lot of mongrel breeds, as these will supply eggs varying in size, shape and color. White eggs are preferred in most of the markets, and they should weigh at least two ounces each. By using purebred birds of any particular breed and selecting these carefully, it will be found possible to produce large eggs with uniform size and color.

#### Sound Food.

Certain foods have a tendency to impart an undesirable flavor to the eggs. On this account, care should be exercised to make certain that the feeds are clean and wholesome. Onions, garlic, burnt grains or a low grade of meat meal should be avoided in the production of eggs suitable to the most fastidious market.

## Chicks That Live

Stop wasting eggs—stop losing chicks—with cheap incubators. A Queen costs but little more, and the extra chicks it will hatch, and that will live and grow, soon pay for it.

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Alfred Cramer, Morrison, Mo., says: "I have operated about ten other incubators and the Queen is superior to any of them." S. L. Todd, Green Forest, Ark., says: "I have tried six other machines, high and low priced, and the Queen is the best incubator I ever saw." Book Free.

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#### Clean Quarters.

To avoid having the eggs soiled so that they must be washed, it is important that the hens be maintained in a place where their feet and feathers will not be soiled. Great care should be exercised to make certain that the house and nests are clean, as dirty nests always contaminate the eggs. One can wash the eggs and improve their appearance greatly, but this invariably has a detrimental effect upon the luster and keeping qualities, so that it is best to avoid washing them. Hens always do better where they have good ventilation and proper sanitary quarters, and if for no other reason than to maintain them in a healthy condition, care should be exercised to keep the yards and nests clean.

#### Gather Eggs Frequently.

The nests should be placed in as cool a place as possible and where eggs may be gathered conveniently. It is important that eggs be gathered at least twice a day in the hot summer weather. At 11 a. m. and 4 p. m. are considered the best times to gather the eggs, but where trap nests are used, they must be secured more frequently. A fertile egg will begin to hatch at 70 degrees F. and this temperature is very soon reached in our climate. After beginning to hatch, the egg rapidly passes through special change which impairs the quality of the egg, and the hatching process continues even as low as 60 degrees. On this account, it is important to make certain that the eggs are not heated to a point where they will begin to hatch.

#### Keep Eggs in a Cool Place.

The best temperature for keeping eggs is about 40 to 50 degrees F. and this temperature can only be reached by means of artificial measures in most parts of Arizona throughout the summer weather. It is important to have such a special place that will maintain them in a dormant condition. Eggs will keep fresh over several weeks if stored in a cool moist place, and on this account the age of the egg is not as important as the environment it has been in from the time of laying.

Therefore, an egg that is two weeks old may often be in better condition than one that is one day old improperly stored. Eggs are extremely porous and may be easily contaminated by means of vegetables or decayed matter in storage. For this reason, they should always be stored where there are no onions, cabbage, rancid butter, or any other substances that might impart an undesirable flavor to them.

#### Market Eggs Frequently.

One of the secrets of success in the production of fresh eggs is to make certain that they are marketed at least twice a week, and it is best to send them to market every day. In this way the eggs will soon find their way to the consumer and are much more likely to be used in the fresh condition. On the other hand in cool weather and where special facilities are used to keep the eggs at a low temperature a first class quality of egg may be marketed once a week or once in two weeks. These eggs do

(Continued on page 15)

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In traveling, you are entitled to stability—service, and protection, for every dollar you expend—

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## Percheron Stallion

An unusual opportunity to purchase a good stallion. Foaled June 1913. Utah bred. Sire imported Damocles. Very large and finely developed. Direct all inquiries to B. T., Utah Farmer, Lehi, Utah.

## DAY OLD CHICKS AND HATCHING EGGS.

LEGHORNS, ROCKS, REDS AND MINORCAS. Hardy winter laying strains. Prices reasonable. Send for free circular. Do it now.

**MANTI MAMMOTH HATCHING CO.**  
Manti, Utah.

## WE MAKE

Farm and Ranch Loans in Utah, Idaho, Wyoming, Oregon and Colorado.

**MILLER & VIELE**

803-7 Kearns Bldg.  
Salt Lake City.

## BUTTER WRAPPERS

We carry a large stock of the Best vegetable Parchment Butter Wrappers and Especially Prepared Ink for Printing the same. We furnish them Postage Prepaid at the following Prices, money to accompany order.

100	\$ .90
200	\$1.25
500	\$2.00
1000	\$2.75

Send all orders to

**THE UTAH FARMER**  
LEHI, UTAH

## FOR SALE

Mammoth Bronze Turkey Gobblers. Spring birds now weighing between 20 and 25 pounds. First prize winners at fair. For information write

**C. L. THORPE, JR.**

Axtell Utah

## FOR SALE

1 Registered Jersey Bull 2 year old. 7 head cows and heifers—4 milking. Good grade, well bred from the best milk and butter family of the U. S.

**O. A. WILLIAMS.**

Kaysville Utah

## CHEAP AT \$100,000

### TAKE IT FOR \$25,000

160 acres joining town of Garfield and A. S. and R. smelter, on three railroads, 16 miles from Salt Lake City, can plat 300 building lots. Garfield is bound to grow. Balance of land contains millions of tons of lime rock, thousands of tons will go 50 per cent and better, fine for fluxing. An immense body of lime, will make best cement in Utah. American Smelting and Refining company owns thousands of acres and all the land surrounding this. A big snap at \$25,000.

Have \$50,000 equity in first-class, improved downtown property paying 9 per cent net for sale, or will exchange equity for other property.

Improved business property on Broadway; fine location, good interest on investment. This property is bound to advance. Cheap at \$40,000.

**GEO. W. DANLEY**

Was. 2989. 707 Walker Bank Bldg.

## Money to Loan

On improved farms with primary water rights, at reasonable rates."

## INTER-MOUNTAIN LIFE INSURANCE CO.

11th Floor Boston, Bldg.  
Salt Lake City, Utah.

## FRUIT AND GARDEN FARM.

8 acres—part of the old Central Experimental Farm. Only ¼ mile from Lehi, Sego Lily School and Lehi 4th ward meeting house. A farm on edge of Lehi City Limits. 360 apple trees. Prunes, currants, and gooseberry trees.

CASH OR TERMS.

**A. F. GAISFORD**

Lehi Utah

The concrete silo keeps silage perfectly, is almost indestructible, and may be built very cheaply where sand and gravel are available.

## FORTY

registered gilts for spring farrow—Can be delivered immediately. Bred to either of our four imported herd boars: Richards Defender, Keystone Volunteer, Virginia Illustrator or Chief Good Enough.

Our herd contains eight different blood strains—all imported and the leading strains of the U. S.

Every hog is guaranteed—Write us today.

## RICHARDS LIVE STOCK CO.

Jesse S. Richards, Manager.

VIRGINIA (100 miles north of Ogden) IDAHO

## The Grand Theatre

SUNDAY NIGHT ONLY

### VAUDEVILLE SHOW

ALL FEATURE ACTS

THE BIGGEST VALUE IN  
SALT LAKE CITY FOR  
10 AND 20 CENTS.

121 East 2nd South  
SALT LAKE CITY, UTAH.

## PRODUCTION OF GUARANTEED EGGS.

(Continued from page 14)

not keep as well as the newly laid egg when exposed to warm temperatures or average conditions.

Use a Special Container.

A guaranteed egg should be marketed in neat, attractive form. No other factor lends as much to making eggs attractive as that of placing them on the market in proper size cartons. These cartons should give the name of the ranch and owner as well as state when the eggs were laid and give a guarantee of the quality of each egg.

There is no secret about the production of fresh eggs of first quality. All that is necessary is the use of good business judgment in the production and marketing of the eggs. When eggs of superior quality are offered to the public they are in themselves the best recommendation for their quality. Such eggs are readily appreciated and always bring an advanced price, as discriminating buyers hesitate to take any chance on the quality of eggs. No other farm products can vary as much in quality as eggs, since a rotten egg is not only an entire loss, but will spoil a whole meal for any family.

## GET MORE EGGS.

If your fowls are not producing the eggs they should at this time of the year, don't feed expensive forcing feeds, laying tonics, or other stimulants. See that your poultry house is clean, well ventilated yet free from draughts. Plenty of fresh air is very important, and the lack of this, overcrowding, or a draughty house may cause colds, roup or other serious diseases.

Insects, worms, etc., have been available to the industrious hen during the spring and summer to supply a very important part of the necessary egg-producing nutrients; now this supply is gone and something must be given to take its place. Skim milk and buttermilk are especially good. Beef scraps are also very good, but in many places this is too expensive. The lack of milk or beef scraps in a winter feed may mean no eggs in the nest. Give your fowls a clean, light, dry, well ventilated house, and supply them with plenty of good, clean, wholesome food and there should be no shortage of eggs at that time.

## A Good Winter Ration

### Scratch Feed:

Wheat ..... 200 pounds.  
Corn ..... 100 pounds.  
Barley ..... 100 pounds.

Two or three hours before the fowls go to roost feed this scratch feed in a litter of straw at the rate of one quart for each fifteen fowls.

### Mash:

Bran ..... 200 pounds.  
Shorts ..... 100 pounds.  
Barley (finely chopped)

..... 50 pounds.  
Oats (finely chopped) ..... 50 pounds.  
Salt ..... 1 pound.

Keep this dry mash in self-feeding hoppers available at all times. Give the fowls all the milk they will drink or add 20 pounds of beef scraps to this mash. Feed this mash once a day, at noon, moistened with buttermilk—just what the fowls will clean up in from ten to fifteen minutes. Keep alfalfa leaves, oyster shell or other fine grit and fresh water available at all times.

## EXCURSION RATES TO LOGAN VIA SALT LAKE ROUTE.

Account Annual Farm and Home Conventions at Logan, Utah, the Salt Lake Route will sell excursion tickets from all Utah stations January 22-23-24-28-29 and 30th. Tickets will be good returning until February 7th.

Tramp the snow about the fruit trees. This may disturb the winter quarters of mice and protect your trees.

Uncle John says: I stand for co-operation, s'long's the other feller don't spect me to do all the co-operator'.—The Progressive farmer.



### PARCEL POST MARKETING.

The farmer who wishes to sell his products by parcel post, and the housewife who wishes to use this method of securing country produce for her table, will find many useful points in Farmers' Bulletin 703. "Suggestions for Parcel Post Marketing." This bulletin, in addition to explaining the postal rates and measurement for parcel post matter, discusses in some detail the types of containers which are most successful and the methods of grading and packing produce, so that it will reach the consumer in good condition, and be attractive in quality and appearance. In treating standards for parcel post shipments, the bulletin tells how to select, handle and pack poultry, and how to grade and pack the various fruits and vegetables which the average farmer is likely to market through the post office.

The bulletin points out that one of the common obstacles to establishing parcel post communication between farmer and consumer is that the farmer may be unwilling to offer goods at a price which attracts the customer, or that the consumer may offer a price lower than the farmer can obtain at a local market. To quote the bulletin:

"Not only must the farmer have something additional to the usual price to compensate him for the extra work, container, and postage required, but the consumer must also have something to attract him to marketing by parcel post. In determining what the price shall be, both the farm price and the retail price paid by the consumer when he markets in the ordinary way should be taken into consideration. The consumer must receive either a better article at the usual retail price or an article of the grade usually purchased at some concession in price.

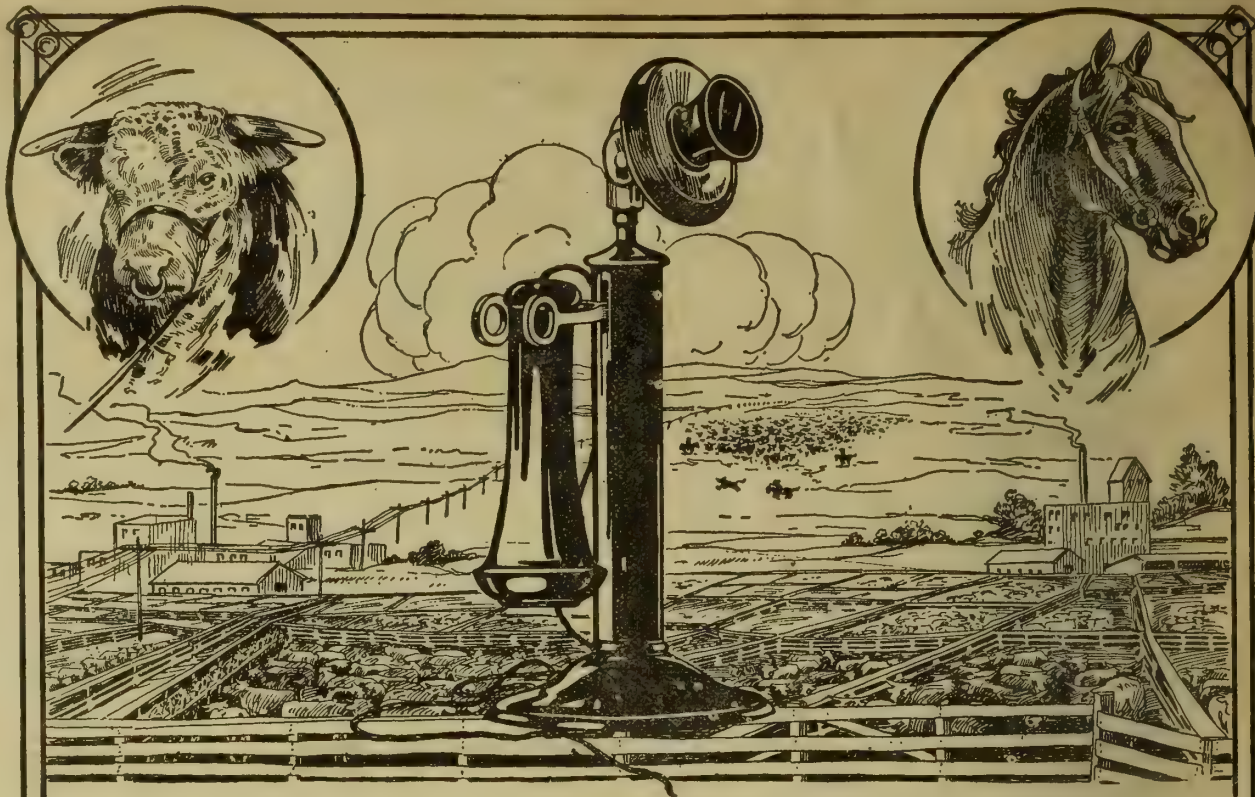
"It is probable that the point which will make the strongest appeal to the average consumer is that he can secure by parcel post a fresher, brighter, more attractive, and thus possibly a better product than he can obtain otherwise.

"The average producer, as a rule, does not realize the importance of appearance as a factor in selling goods and frequently is careless and indifferent in preparing produce for market. The consumer, on the other hand, relies very largely upon appearance in selecting food supplies, and unattractive articles are passed by promptly.

"A personal acquaintance should be established between producer and consumer, when they come into business contact. This will help a great deal in furthering parcel post marketing, and also will eliminate many of the misunderstandings which may occur from time to time. A definite understanding should exist as to the duties of each in regard to remittances, claims for damaged or spoiled produce, and the preservation and return of containers."

Annual Farm and Home Conventions  
Utah Agricultural College Logan,  
Utah, Jan. 24 to Feb. 5th.

For the above occasion the Salt Lake Route will sell excursion tickets from all Utah stations to Logan, Utah, January 22-23-24-28-29 and 30th. Tickets good returning until February 7th.



## The Stock Industry and the Telephone

No single industry derives more benefit from a comprehensive telephone service than does the stock business.

Telephone service unites the breeder, the shipper and the market in a community of interest.

The market uses telephone service in canvassing the territory of supply.

The breeder uses telephone service in keeping in touch with demand.

The shipper uses telephone service to keep himself informed as to market conditions.

The ranchman uses telephone service in the economical handling of his stock on the range—in feeding, in negotiations with buyers and in securing cars and making other shipping arrangements.

Altogether, comprehensive telephone service is a valuable factor in the growth and development of the stock industry.



### STOCK SHOW WEEK IN DENVER

January 16th—23rd

### SPECIAL LOW RAILROAD RATES

Of Course, You Are Coming.

The Mountain States  
Telephone & Telegraph Co.



### AWKWARD

"Why are children so much worse than they used to be?"

"I attribute it to improved ideas in building."

"How so?"

"Shingles are scarce, and you can't spank a boy with a tin roof."

### MISTAKE CORRECTED

Excited Customer—Look here! You gave me morphine for quinine this morning.

Druggist—Is that so? Then you owe me twenty-five cents.

Don't expect the house plants to flower as well during the cold, dark

months of early winter as when we have more sunshine. Most plants require sunshine for their best growth.

Now is a good time for the farmers' club to discuss the matter of fixing-up around the home, the school house, or the cemetery. Make plans that can be carried out next spring.



UT

# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region

OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE

VOLUME XII; No. 25

LEHI AND SALT LAKE CITY, UTAH

JANUARY 22, 1916



The snow fall during the past ten days has been a record breaker in many sections. All the way from 8 to 15 inches has fallen in the valleys, while the reports of those coming from the canyons say that as much as 4 feet of snow has fallen during the last storms. From all indications an abundant water supply is assured for this year's crops.



# A Wonderful Snow Storm

## What Does It Mean to You?

THE STORM OF THE PAST FEW DAYS HAS BEEN SO GENERAL AND SO MUCH SNOW HAS FALLEN THAT NEARLY EVERY ONE IS TALKING ABOUT THE STORM AND ITS INFLUENCE ON NEXT YEARS WATER SUPPLY. DEEP SNOW IN THE MOUNTAINS WELL PACKED AND BLOWN INTO THE REVENES AND CANYONS, MEANS LATE WATER FOR OUR CROPS THIS YEAR. PLENTY OF WATER MEANS GOOD CROPS, AND GOOD CROPS MEANS PROSPERITY FOR EVERYONE

WE ARE GLAD TO KNOW THAT THERE ARE SUCH GOOD PROSPECTS. NOW WE ARE INTERESTED JUST AT THE PRESENT TIME IN GETTING A GREAT MANY OF OUR READERS TO RENEW THEIR SUBSCRIPTIONS. MANY HAVE ALREADY DONE SO AND WE APPRECIATE THEIR HEARTY AND QUICK RESPONSE. THERE ARE A NUMBER WHO HAVE NOT ANSWERED OUR LETTERS AND WE MAKE THIS GENERAL APPEAL, FOR WE WANT EVERY ONE TO RENEW THEIR SUBSCRIPTION AND WOULD LIKE THEM TO DO IT THIS MONTH. THE BUSY RUSH OF THE HOLIDAYS ARE OVER SO FIND THE LETTER WE SENT YOU AND ANSWER IT TODAY. THE UTAH FARMER IS GOING TO BE SO MUCH BETTER THIS YEAR. NEW HELP HAS BEEN ADDED TO THE STAFF OF THE FARMER AND WILL GIVE A GOOD ACCOUNT OF THEMSELVES BEFORE THE YEAR IS OVER. WE JUST FEEL SO GOOD OVER THE MANY GOOD THINGS THAT WE WILL GIVE OUR READERS THIS YEAR, THAT WE ARE WILLING TO GUARANTEE EVERY ONE WILL GET A BIG DOLLARS WORTH. YOU CAN'T AFFORD TO MISS A SINGLE ISSUE AND FOR THIS REASON WE URGE YOU TO ANSWER OUR LETTER RIGHT NOW.

IT IS ONLY A SMALL AMOUNT TO EACH OF YOU, BUT, SEE WHAT A GREAT ENCOURAGEMENT IT WOULD BE TO US IF EVERY ONE WOULD RENEW THIS MONTH. WE NEED YOUR SUPPORT TO MAKE THIS THE BEST PAPER IN THE WEST. WE ARE SURE THAT WE CAN DEPEND ON YOU.

DO A LITTLE MISSIONARY WORK AND TELL YOUR FRIENDS AND NEIGHBORS ABOUT THE UTAH FARMER AS WE WANT TO ADD 5000 NEW READERS TO OUR LIST. WE KNOW WE CAN DO IT IF YOU WILL HELP. REMEMBER WE ARE OUT AFTER 5000 NEW NAMES WE WANT TO ENLARGE OUR FAMILY. SURE YOU WILL HELP US.



## Farmers, Make Your Inventories of Farm Capital Now

NOW is the time for every farmer to take an inventory of all Capital invested in the farming business just as any other business man "takes stock." In some instances March, April, May or June may be more opportune for taking an inventory of Farm Capital. All those farmers, however, who are co-operating with the respective County Agents of the various counties in the State and the State Farm Management Demonstration Agent in carrying on the Farm Management Demonstrations, should take an inventory of their farm business January 1st, 1916.

These Inventories on these farms should include the following items:

Real Estate.	
1. Value of Real Estate*	\$
2. Value of Dwelling	\$
3. Value of Other Houses	\$
4. Value of Barns and Other Buildings	\$

\*The value here given should be what can actually be obtained for the Real Estate etc., at the going market price.

The foregoing gives us the total amount of Capital invested in Real Estate and permanent farm improvements. We should then have an inventory of all farm live-stock. The live-stock should be divided into the following classes in order to take account of the increase in the value of young stock from the beginning of the year to the end of the year Jan. 1st, 1917.

Live-stock.			
Kind	No.	Value	Total Value.
Cows		\$	\$
Heifers*		\$	\$
Calves**		\$	\$
Bulls***		\$	\$
Steers***		\$	\$
Totals		\$	\$

\*Female stock more than one year old that have as yet not calved.  
\*\*All stock under one year old.  
\*\*\*Bulls are those over one year old  
\*\*\*\*Steers more than one year old.

Live-stock Con't.			
Kind.	No.	Value	Total Value.
Work horses		\$	\$
Other horses		\$	\$
Colts		\$	\$
Mules		\$	\$
Oxen		\$	\$
Totals		\$	\$
Swes		\$	\$
Lambs		\$	\$
Rams		\$	\$
Totals		\$	\$

Brood sows		\$	\$
Other hogs*		\$	\$
Pigs**		\$	\$
Boars		\$	\$
Totals		\$	\$
*Hogs worth \$5.00 or more.			
**Pigs worth less than \$5.00.			
Chickens		\$	\$
Turkeys		\$	\$
Ducks		\$	\$
Geese		\$	\$
Totals		\$	\$
Bees		\$	\$
Total		\$	\$

heifers and how many bulls. It will show just how many have been made steers and whether they are sold or not and what the relative value of cows, heifers, calves, steers, bulls, etc., is at the beginning and end of the year.

The prices or value given here should be the actual market value of the animals and not a personal value. With an inventory at the beginning and end of the year the farmer can see just how much more his live-stock is worth at the end of the year than the beginning. It will also show how much in dollars and cents

The inventory of machinery may be obtained by following this outline:

Machinery.		
No.	Kind.	Value.
	Heavy Wagons	\$
	Light Wagons	\$
	Buggies	\$
	Sleighs	\$
	Hay Racks Beet Racks, etc.	\$
	Walking Plow	\$
	Sulky Plow	\$
	Disc Harrows	\$
	Spike-tooth Harrow	\$
	Spring-tooth Harrow	\$
	Roller	\$
	Weeder	\$
	Corn Planter	\$
	One Horse Cultivator	\$
	Two Horse Cultivator	\$
	Corn Binder	\$
	Grain Binder	\$
	Grain Drill	\$
	Thrashing outfit	\$
	Hay Loader etc.	\$
	Mowing Machine	\$
	Hay Rake	\$
	Hay Fork, Derrick, Ropes, Cables, etc.	\$
	Manure Spreader	\$
	Corn Grinder	\$
	Corn Shredder	\$
	Corn Sheller	\$
	Silage Cutter	\$
	Potato Planter	\$
	Potato Sprayer	\$
	Potato Digger	\$
	Orchard Sprayer	\$
	Gasoline Engines	\$
	Tread Power	\$
	Wood saws	\$
	Work Harness	\$
	Light Harness	\$
	Dairy Utensils, can, pails, etc.	\$
	Cream Separator	\$
	Evaporator	\$
	Poultry Equipment, brooders, etc.	\$
	Incubators, hatchers, etc.	\$
	Bean Puller	\$
	Minor Equipment i. e., pitchforks, caperenter tools, blacksmith tools scrapers, log-chains, shovels, axes, hammers, etc.	\$
Total		\$

The value given in this inventory should be the actual value of each piece of machinery at the present time, not what it was worth when it was new. The inventory as thus taken gives us an itemized statement of all money invested in machinery on the farm. The inventory at the end of the year January 1st, 1917, will show the depreciation in the machinery during the year. New machinery bought will be added in the inventory at the end of the year. In order to make our inventory of capital complete we must have an inventory of the farm "Feeds and

(Continued on page 7)

Salt and lemon juice removes rust stains from white goods, and tough meat may be made tender by adding a teaspoonful of lemon juice to the water in which it is to be boiled.

### Looking Outward.

Dr. J. A. Widtsoe.

Much is said about looking upward or downward, but the most important direction—outward—is seldom mentioned. Upward lies in the future; downward in the past; but outward to this day.

All about us lie mighty things of life; and great is he who in his day knows the things of that day. It is well to know the past and have visions of the future; but to make the past and the future alive, they must be read in knowledge of the present. Therefore it is that men who look about them—outward—and become acquainted with the things of their day, accomplish most.

The farmer needs the habit of looking outward for he is greatly tempted to make his own farm and his own methods of work sufficient, especially if he makes thereby a fair living for himself and his family. Yet, however well a man may do his work it may be done better, because there is no end to advancement. A man's work may be so ordered that it will bring more money or more joy. From the humblest worker something may be learned; and from those who have achieved great success the direction of emphatic improvement may be determined.

The farmer then, tempted to look inward, should look more outward. He should seek knowledge of all new things that are concerned in his work; and of those that lie near by his work. Thus he will gain new mastery over his farm. His new strength will be as the strength of many men. Soon a new joy will come to him—the joy of the man who grows in knowledge and in intelligent domination over his work. The farmer, looking outward upon the world and its possessions, and partaking of them respectfully and greatly will become a big man; the big joys of life will become his, and he will stand even-shouldered by his fellowmen, whatever their life pursuits.

The outward-looking farmers know all this. They flock to the farmers institutes. They crowd the halls at the great round-ups and farm conventions. They drink in new truth which they use in their labors. They wrest from nature, smilingly because understandingly, whatever success they desire. Without the knowledge of today, the farmer is either a worker in the past or a dreamer of the future. The farmers of Utah have woven the past and the future with the present, and they have conquered the land.

Let us be knowledge-hungering, to-day-loving, outward-looking men!

The live-stock being inventories in as well as numbers the live-stock has the above manner will show at the end of the year, January 1st 1917, when a like inventory is taken, just how much the young stock has increased in value. Next year's inventory will show just how many heifers became cows, how many calves have been



## DAIRYING

### NORTHWEST DAIRY

#### PRODUCTS SHOW.

Every dairy man should be interested in this show. It will be under the direction of the Agricultural Colleges and the Dairy Field Agents of the Department of Agriculture. Strictly educational in its affairs. It will be held at Spokane Was., February 24 to 26, 1916.

The Show for 1916 will embrace the following features: (1) A competitive exhibit of butter from the creameries of various states, (2) a students butter-judging contest, (3) a butter-makers' butter-judging contest. (4) a meeting of the creamery men, and (5) a conference and meeting of the Board of Directors.

Anyone who is interested should write to the Dairy Division Department of Agriculture at Salt Lake City and secure the details for any of the above features.

The dairy business is growing and many people are producing milk butter or cheese. As with other farming business the question of markets and marketing is one for the dairy-men. Certain local markets may demand butter of different composition from that required by the general market. If small creameries are trying to sell part of their output on general markets and part local it would be better to have a uniform color, salt and package.

If we continue to grow we shall certainly have to look toward marketing our products away from home. These kind of meeting will help you in your business and every dairyman should learn more of the details.

#### THE CHEMISTRY OF THE SOURING OF MILK.

Milk is an ideal food for man. It is also good food for many other forms of life. Among these are the minute organisms known as bacteria. Bacteria when supplied with food and kept at ordinary temperature thrive and multiply very fast. Under these conditions they have a remarkable effect on the food, this effect varying with the kind of bacteria and the kind of food. For instance it is due to certain kinds of bacteria that milk sours. This souring is a chemical reaction which they bring about.

Milk becomes sour because of the

development in it of lactic acid. A predominating property of acids is that they are all sour. All green fruits are sour because of the presence in them of acids. vinegar is sour because of the acid in it. Milk contains a sugar known as milk sugar or lactose. The bacteria which get into the milk cause a chemical change which effects this lactose. A part of it is changed into lactic acid. If it were not for the presence of this sweet constituent (the lactose) milk could not develop the sour constituent (the lactic acid). The change is from one extreme to the other.

That this development of lactic acid is due to bacteria has been definitely proved. If bacteria were kept out of milk it would not sour but would stay sweet and whole almost indefinitely. It is practically impossible to keep them out, however. They are to be found almost everywhere, even within the cow's udder, and on dust particles. However, milk has been obtained and kept so free from bacteria that it would keep sweet for long periods.

Mr. J. A. Spears, of Clinton Co., Ohio, has kept milk for seventeen days in an ordinary spring house without souring. Careful maintenance of sanitary conditions and other precautions to keep down bacteria made this possible. Milk has been shipped to Europe and back without the use of preservatives and still remained sweet and palatable because of its negligible bacteria content.

Not all of the lactose is changed into lactic acid, no matter how many bacteria are present or how favorable the conditions for their development. This is because the lactic acid formed stops the action of the bacteria after a certain amount of it is formed. Never more than about 0.85 per cent of the acid is formed. This is enough to completely stop further chemical action.

Acids curdle milk. Curdling is the separating out of the casein. Acids cause this separating or precipitation. Milk added to the more acid fruits, for instance, is always curdled. It is seldom eaten on cherries and similar fruits on that account. The curdling of sour milk is due to an acid also, due to the lactic acid formed. It takes from 0.35 to 0.4 per cent of lactic acid to curdle milk under usual conditions although temperature and certain other factors influence this.

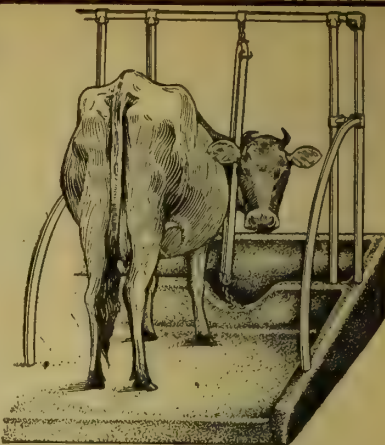
Under conditions which are practicable the bacteria which cause the souring of milk cannot be kept out of it. Sanitary production and handling mean that milk will keep sweet a reasonable length of time if kept cold. When cold the bacteria do not develop fast. They are sure to cause the formation of enough lactic acid eventually, however, to change the sweet taste to sour.—E. J. Crane, Ohio State University.

It seems like a waste of good money to some men to buy scales for use in the cow stables; but if they show you the worthlessness of some one or more cows, so that you get better ones, what then? Not much loss about that, is there?

## Is This Your Cow?

Do your cows enjoy the comfort and freedom of flexibly hung, swinging steel stanchions, or are they cramped and miserable in rigid wood "stocks?"

The comfort of your cow is a vital factor in her milk production. The difference in results between a comfortable and an uncomfortable tie represents **YOUR PROFITS!**



The Loudon Tubular Steel Stanchion is strong smooth, and sanitary. It is flexibly hung with a shingle heavy chain that allows it to swing freely with every movement the cow makes. It holds her securely in her place but gives her **PASTURE COMFORT.**

The Loudon Stanchion may be hung anywhere; in either steel or wood frame. It costs the same as a good halter—outlasts your barn.

A postal will bring you our complete stanchion booklet. Write for it today.

## Or This?

#### THE LOUDEN LINE INCLUDES

Steel Stalls.	Hay Tools.
Steel Stanchions.	Barn Door Hangers.
Steel Animal Pens.	Garage Door Hangers.
Litter Carriers.	Power Hoists.
Feed Carriers.	Horse Barn Fittings.

"Everything For The Barn"

## Miller-Cahoon Company

Murray, Utah.

Idaho Falls, Idaho.



#### LOSSES AND TROUBLES OF THE STOCKMAN.

During the season of 1915, on the ranges of the National Forest, District 4, embracing Utah, Nevada, Southern Idaho and Southwestern Wyoming, 40,400 sheep, 460 cattle and 14 horses were killed by predatory animals, among which the coyote is the chief offender. Late last season the U. S. Biological Survey, in co-operation with the Forest Service, inaugurated a vigorous campaign of extermination against the coyote and his co-workers, within and adjacent to the Forests. The regular force of Forest Rangers, who are able to devote a little time to predatory animal extermination, in connection with their other duties, report a total of 1,168 killed during 1915. This number while not large, means a considerable saving to the stockmen grazing their herds on the Forest ranges.

Poisonous plants killed 8,000 sheep, 2,250 cattle and 11 horses on the Forests during the past year. Disease has a toll of 5,278 sheep, 655 cattle and 96 horses.

Summarized, the known losses of livestock on the Forests during 1915, from the three listed causes, amounted to 53,700 sheep, 3,370 cattle and 120 horses, having a total value of \$435,000 on an approximate estimate. One-half of the total number of sheep lost from the various causes was reported from the Forests in the State of Utah.

Every possible effort is being made to decrease these annual losses, which, although very small in proportion to the total number grazed, still constitute a considerable item. With the

**\$15<sup>95</sup> ON TRIAL**  
Upward  
**American**  
FULLY GUARANTEED  
**CREAM SEPARATOR**

A SOLID PROPOSITION to send new, well-made, easy running, perfect skimming separator for \$15.95. Skins warm or cold milk, making heavy or light cream. Bowl is a sanitary marvel; easily cleaned.

**ABSOLUTELY ON APPROVAL**  
Different from picture, which illustrates our large capacity machines. Western orders filled from western points. Whether dairy is large or small write for handsome free catalog. Address:  
**AMERICAN SEPARATOR CO.**  
Box 4098 Bainbridge, N. Y.

**EAR PERFECT TAGS**  
Samples Free  
**ATTACHED INSTANTANEOUSLY**  
Name and Address. Numbered if Desired.  
**LEG BANDS for Poultry, Pigeons, Turkeys**  
**SALT LAKE STAMP CO. Salt Lake, Utah.**

several States, the Forest Service, Biological Survey, other Federal Bureaus and various stockmen's organizations uniting this year to take vigorous steps against the predatory animal, the losses next season from this cause are sure to be much smaller.

Cows will not give better milk than the feed you place before them. They can't. Give only the best and the purest food.

It's a matter of pride with us that our small depositors are as enthusiastic in their commendation of this institution as are our larger customers.

COURTESY and SERVICE are for ALL who do business with us.

## Walker Brothers Bankers

SALT LAKE CITY





# LIVE STOCK

## FEEDING OF BEEF CATTLE.

(Paper given at the recent Round-Up at Delta, Utah, by Geo. A. Nixon)

Holden, Utah.

In the winter of 1893 and 4 we started to feed, having a contract to furnish 300 head of beef steers to the Utah Slaughtering Co., to be delivered on board cars at Juab; at the following prices 60 head December 1st at 3 cents per pound gross weight weighed at Holden with a 4 per cent shrink, 60 head to be delivered the 1st of the following four months with a 25 cent per hundred raise each month.

Of this number we fed 125 head, the remainder were fed and furnished by our neighbors. Although the price was low at that time, to what it is now, we felt that it was a profitable business, hay being low only \$3.50 per ton in the stack, and have continued feeding every year since; having fed as high as 200 head during the winter.

Some of our neighbors have looked at it differently and have discontinued the business. On account of the ranges failing, we have not fed as many the last few years, needing the feed for our stock cattle; but the prices have continued good and we are now feeding a car load of steers to be weighed and received at Holden February 1st, 1916, at \$6.25 per hundred.

Perhaps the reason some have made a failure of it, is their method of feed-

ing. We always have good feed racks, in which neither hay or grain are wasted. Good foundations for the cattle to stand on while feeding, and good sheds for shelter. We have learned that it takes a man that likes the business and is quiet with cattle, to make a good feeder.

To get best results from feeding, cattle should have access to salt and plenty of water from flowing wells or pipes, as ice cold water is not good. Feeding should be done regularly, preferably three times a day. Heaviest feed to be given at night. Have never had any experience in feeding anything except alfalfa and grain, always feed chopped grain.

Find corn chopped on cob and mixed with chopped rye makes a good, cheap feed for fattening. A good feeder will soon learn about what amount of feed is required, should not over feed one time and under feed another. Feeding is not a lazy man's job.

From experience would recommend the Hereford, Durham, Angus, and Galloway breeds as feeders. In selecting feeders do not choose those with a long, slim, nose generally they are lacking in constitution. But those with a rather short, broad head, good girth, round flank, and good hips. There is as much in marketing cattle after they are fattened as there is in preparing them for market.

In mentioning the best breeds for feeders do not wish to discourage

feeding the poorer classes of cattle; in fact would advise those who have that class of cattle to dispose of them in that way and breed for the better classes. Have found our most profitable markets in California, and in mining camps. "

When you have anything for market, always treat your buyers honorably, to this we attribute the greater part of any mans success in business, as it will materially help in supplying a good market, without hunting it, after you are once known.

## THE BEAUTIFUL EXPOSITION AT SAN DIEGO.

Will remain open during 1916. The Salt Lake Route has arranged a personally conducted side trip to San Diego from Los Angeles in connection with the big Mid-Winter Excursion on JANUARY 29th. \$35.00 will buy a round trip ticket to Los Angeles on that date only, giving purchaser reduced rates for numerous interesting side trips. Make your reservation early. For further particulars consult nearest Salt Lake Route Agent or

address J. H. Manderfield A. G. P. A. 10 E. 3rd South St. Salt Lake City.

The only cure for sows laying on new born pigs is to provide a suitable place where this is least liable to happen.

## ROWE'S HOG OILER NEW IDEA

Kills Lice Cures Mange Disinfects Pens and Yards Prevents Disease



Only Oiler made without valves, cylinders or wheels. can't clog, stick, leak or get out of order. Guaranteed 5 years. Uses Crude or Medicated oil. Kills lice, keeps pens and yards disinfected. One oiler cares for 25 to 30 hogs. \$9.25 delivered 1 gal. oil free. CALKO HOG POWDERS is a hog conditioner and worm expeller. 25 pound sack \$2.00. HEALTHY HOGS—MORE PROFITS Catalog Folder Sent Free. CALLISTER-KORTH CO. McIntyre Bldg. Salt Lake City, Utah

## Ask Me About Salt Lake County

I am representative for the Inter-Mountain Rural Credit Association for Salt Lake County. Will gladly call on you to explain any details. Write or telephone me and I will come and see you.

P. T. MOYES.

465 South 3rd East, Salt Lake City, Utah. Phone Was. 7370-W

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## A Small Annual Payment Will Take Care of Your Loan With No Worry of Foreclosure

### THIS IS HOW WE GET OUR 6% MONEY.

Each share of stock is sold for \$100.00. Of this amount \$50 is placed in the Surplus, or Working Fund, and \$50 in the Capital Stock, or Guarantee Fund.

The Surplus is loaned to the members at 6 per cent interest per annum on first mortgages.

These mortgages are not sold, but they are placed in trust and bonds equal to their face value, bearing 5 per cent interest and secured by them, are issued and sold.

The money received from the sale of the bonds is then loaned at 6 per cent interest on first mortgages, which are also placed in trust, and bonds of equal value, bearing 5 per cent interest, are issued and sold.

This process is repeated until the Association has outstanding bonds equal to fifteen times the amount of its Capital and Surplus.

In addition to having the bonds secured by an equal amount in mortgages, the Guarantee Fund is pledged as further security for the bonds of the Association.

The bonds of the Association, thus secured, will be one of the highest class bonds issued in the United States, and will enable the Association to secure money for its members at the lowest possible rate.

### ONLY \$73 A \$1000

a year will pay a loan from us, both interest and principal in 35 years, without commissions, renewal charges, or other expense, and you may pay off your entire loan any time after five years.

Under the present conditions you are paying 9 per cent, or \$90 a year for interest alone, and at the end of the period for which it was loaned you still owe the principal of \$1000. Under our plan \$73 a year will pay off a loan from us of \$1000, both interest and principal at the end of the time.

This is a Co-operative Association, therefore, you must necessarily become a shareholder in order to enjoy the advantages it has to offer. Clip out, fill in and mail the coupon today. The sooner you join the Association, the sooner you will get your loan.

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Without obligating me in any way please send me your sixteen-page booklet which explains in detail the plan of The Inter-Mountain Rural Credit Association and tells how I can become a member and enjoy the benefits of this co-operative organization of Utah and Idaho.

Name.....

Address.....

**The Inter-Mountain Rural Credit Association**  
606 McINTYRE BUILDING. SALT LAKE CITY, UTAH.



## Field and Farm

### WATER ON THE FARM.

Pure and Abundant Supply a Prime Necessity — Mechanical Systems That Add Greatly to the Comfort of the Farm Household.

No questions are of greater importance to the farm family than the farm's water supply and the disposal of its sewage. The prospective builder should make certain that these problems are solved before he does anything else for they lie at the foundation of the entire household's health and comfort.

Purity and abundance are the two essentials of water supply. Ordinarily, it has been calculated, each person on a farm will require thirty gallons a day, each horse from ten to thirteen, each cow from ten to fourteen, each hog from one to three, and each sheep one gallon. If greater quantities are obtainable, so much the better.

Wells and springs are the usual sources of farm water. Both may easily be contaminated, and the vicinity should, therefore, be inspected for possible sources of pollution. In some cases typhoid epidemics have been traced to springs which have become polluted through fissures in the rock strata. Contamination may also reach well water through uncemented joints in the masonry, and for this reason it is always well to cement the joints for a considerable distance from the top. Surface contamination can be guarded against by the erection of a suitable concrete curb.

Once an abundance of pure water has been secured there is no single improvement which will add so much to the comfort of the household as some mechanical system of making it readily available. Where the supply is obtained at an elevation above the house the matter is comparatively simple. A tank or reservoir can be built and pipes run down from it, through which the water will flow by gravity and from which it can be drawn at will. In the majority of cases, however, before the force of gravity can be utilized it will be necessary to pump the water into an elevated tank. Unless this is in the house itself it is likely to freeze during severe weather and cause trouble.

Of the various methods of elevating water the windmill is perhaps the most satisfactory in the majority of cases. Its first cost may seem rather

high, but after it is once erected it costs little to operate and maintain. On the other hand, a large storage tank is a necessity as a precaution against long periods of calm weather when no wind blows and the mill stands idle. Water stored in this way becomes warm in summer and in winter is often too cold to give to stock.

The storage difficulty does not exist when the gasoline engine is used, but the engine has its own drawbacks. Although it does not cost as much to install as a wind mill, its operating cost is considerably greater, depreciation is more rapid, and expensive repairs are required more frequently. A 1½ to 2-horsepower engine, however, such as is generally used for pumping water, may be used advantageously for many other purposes on the farm as well. Air-cooled engines are recommended when the pump is intermittent, for they will not freeze in winter. When steady, uninterrupted work is expected, and there is, therefore, no danger of freezing, water-cooled engines are to be preferred.

Where you are able an electric power is very satisfactory at all times of the year.

The pressure or pneumatic tank has the great advantage of enabling modern bathrooms with good water pressure to be located in any part of the premises. The tank also can be placed in the cellar and thus protected from danger of freezing. Under this system, water is pumped in against air pressure of from 40 to 50 pounds a square inch. The chief objection is the initial cost, which is always high.

Under the favorable circumstances a ram is an economical and convenient means of elevating water. The ram, however, is not what in mechanical language is known as "efficient," and, in consequence, there must be a large surplus of water before it is a feasible device. Under this system the necessary power is derived from the downward flow of the water itself, which is so controlled that it enables the ram to elevate a certain portion of it into a storage tank. Much is wasted in the operation, however. Under certain circumstances this may be partially remedied by having the power furnished by the flow of other water.

On the ordinary farm, unless the sewage is disposed of properly, there is danger that the water supply may be polluted. Where privies are in use, they should be located so that no drainage from them can reach the source of water supply, but they should also be readily accessible. The ultimate disposal of the sewage may be accomplished in several ways.

A common but dangerous practice is to discharge it into a convenient stream. This may easily start a typhoid epidemic farther down the stream and should not be encouraged. Surface irrigation over the land is better, but here again care must be taken to prevent the infection of food such as lettuce, which is eaten raw. More satisfactory results are usually obtained from cesspools, and the "teaching cesspool," in which the sewage percolates gradually through porous material, has often proved successful. Such a cesspool may,

### Profit Makers

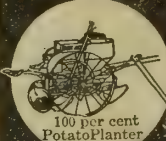
AGLANCE at Government reports shows how great a factor potatoes are becoming in Middle West production. Growers know that modern tools are necessary for satisfactory profit. Last year's crop is nearly 60 million short. Seed will be scarce and high. We have a Potato Planter that puts one piece in each place and one only.

### IRON AGE

Potato machinery, garden tools, spraying machinery, etc., are built to give profit making service. Almost any combination you can think of in each line. Eighty years of factory and farm experience behind their manufacture.

Ask your dealer to show them and write us or our representatives: Utah Implement-Vehicle Co., Salt Lake City, for separate booklets fully describing lines in which you are interested.

Bateman Mfg Co. Box 836 Grenloch, N. J.



Utah Implement-Vehicle Co., Salt Lake City, Utah, Agents and Distributors for the Iron Age Goods.

Wheel Hoes  
Garden Seed Drills  
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Walking Cultivators  
Potato Sprayers  
Bucket, Barrel and  
Power Sprayers  
Potato Diggers  
Cornstubb Cutters  
Fertilizer Distributors  
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2 and 4 Row Markers  
Corn, Bean and Pea  
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Asparagus Ridgers  
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## 2-in-1 Washing Machine



### WASHES, RINSES AND WRINGS

The 2-IN-1 interchangeable lid is a new feature in the washing machine business. You can rinse the clothes with the same power with which you wash them. SAVES ONE-HALF THE TIME AND LABOR.

The 2-IN-2 wringer swings into four positions. The rollers have the forward and backward motion as well as the swinging. The whole operation is controlled by one lever.

The lid can be removed from the washing machine and placed on rinsing tub as shown in the right hand illustration above, and the clothes thoroughly rinsed by the washing dolly. This not only insures a good job of rinsing but REMOVES THE LAST BIT OF DRUDGERY FROM THE FAMILY WASHING. The simplest constructed machine on the market. Equipped for gasoline engine and electricity.

Write for catalogue.

Mailed Free.

S. E. SCHROEDER MFG. CO., Minier, Illinois

## DOCTORS

know and can judge  
our

### Qualifications

from many

### Experiences.

Enquire of those who have inspected  
or practiced at

THE

**SALT LAKE  
MATERNITY HOSPITAL**  
447 THIRD EAST

Miss Gertrude Tolman, Superintendent  
Graduate of the Battle Creek Sanitarium  
and Hospital.

however, be extremely dangerous if located in the path of ground water flowing toward the well. Septic tanks also have a number of important advantages, but it is usually desirable to use filters in connection with them. Sub-surface irrigation is also common in connection with a septic tank.

### FLOWER GARDENS AND FORESTS UNDER THE SEA.

May be seen from the glass bottom boat in the harbor of Avalon, Santa Catalina Island. One of the interest-

ing personally conducted side trips in connection with the Salt Lake Route big Mid-Winter Excursion on January 29th, \$35.00 to Los Angeles and return, on that date only. Special trains with standard and Tourist sleeping cars, Dining and Observation cars start from Salt Lake City. Make your reservations early. Further particulars concerning side trips, routes, etc., may be had from any Salt Lake Route Agent or by addressing, J. H. Manderfield A. G. P. A. 10 E. 3rd South St., Salt Lake City, Utah, adv.



FARMERS, TAKE YOUR  
INVENTORIES OF FARM  
CAPITAL NOW.  
(Continued from page 3)

Supplies," which may be taken in the following manner:

Feeds and Supplies.			
Kind.	No. Tons or Bu.	Price	Total Value
Alfalfa		\$	\$
Other hay		\$	\$
Wheat		\$	\$
Oats		\$	\$
Corn		\$	\$
Straw		\$	\$
Silage		\$	\$
Mangles		\$	\$
Beets		\$	\$
Seeds		\$	\$
Other		\$	\$
supplies		\$	\$
Total		\$	\$

The inventory of Feeds and Supplies should include all those kinds of feed which are fed to live-stock and which are on hand now. Alfalfa or other hay that is now on hand but which will be sold in the near future should not be entered in this inventory of feeds and supplies but just that amount which is to be fed to the live-stock. In figuring the Labor Incomes of these farms that alfalfa, other hay etc., being held for sale is counted as sold at the close of the year or January 1st, 1916.

Summary.  
The inventory of the farm capital as it is invested and itemized may be summarized as follows:

Capital		Value.
1. Real Estate	\$	
2. Live stock	\$	
3. Machinery	\$	
4. Feeds and supplies	\$	
5. Cash to run farm*	\$	
Total Capital	\$	

\*Cash to run farm represents that amount of money on the average which the farmer turns into his farm business during the year and which if it were not turned into the business during the year, could be loaned out on interest.

Farmers who take inventories in this manner and who summarize their farm business, receipts, expenses, etc., for the year at the end of each year are in a position to know definitely where their leaks are in their farm business, which enterprises pay best, and which are not paying and should be eliminated from their business.

The purpose of the Farm Management Demonstrations is to demonstrate the importance of certain Farm Efficiency Factors in the organization of the farm business and their effect upon the Labor Income or farm profits.

Three hundred seventy-nine farm-

# GOOD SEEDS

GOOD AS CAN BE GROWN  
Prices Below All Others

I will give a lot of new sorts free with every order I fill. Buy and test. Return if not O. K.—money refunded

**Big Catalog FREE**

Over 700 Illustrations of vegetables and flowers. Send yours and your neighbors' addresses.

**R. H. SHUMWAY, Rockford, Ill.**

ers co-operated in 1915 in these demonstrations. Most of them kept records of their 1915 farm business and will continue to co-operate in 1916 by giving accurate definite information and business statements of their farm business to their County Agent and the State Farm Management Demonstration Agent.

The results of last years Farm Management Demonstrations are felt for good throughout the entire State of Utah.

**BORROWING MONEY**

There is nothing disgraceful about borrowing money for productive purposes. Borrowing money is a common business transaction of everyday life and, like other transactions in which money is involved, can be done to best advantage by the person who understands his business. It is probable that ninety-nine persons out of every hundred borrow money at sometime in their life time and it is also probable that at least fifty out of a hundred borrow money frequently as a matter of business routine. Of this class it is doubtful if one out of ten would consider a knowledge of the principles of credit from the academic standpoint an advantage. Still it is safe to assert that the majority of business failures might have been averted if the borrowing of money had been done more intelligently. The only consideration which comes to the mind of most borrowers is the matter of the need. Too little consideration is given to what many might call text book details. These details however are real business principles with which the business man or farmer should be thoroughly familiar when borrowing money. The banker soon recognizes the intelligent borrower—the man of business ability and character—and is glad to do business with this kind of a man while the man who has nothing but good tangible assets and is deficient in the intangible things which the banker values more highly, may find difficulty in securing money for his business during periods of financial stringency.—Exchange.

**WHAT PAYS ON THE GOOD FARM**

A study is being made by the Farm Management of why one farm pays and another fails. Essentials to success in farming are proper diversification of the farm business, good yields from crops also from live stock and large size business or farm.

Farms with poor crops generally give low labor incomes, while farms with good crops usually give high labor incomes.

The most profitable ten farms in a certain locality were compared with the average of some sixty farms visited, and in all respects mentioned, were found to be better than the average. In the matter of size, whether considering total acreage, acreage in crops, or acreage in potatoes, these ten farms averaged 50 per cent larger than the average of the locality. In returns from live stock, the ten farms showed 10 per cent more income from each animal than the average. The crops were better especially potatoes, the most important crop, which went 122 bushels to the acre against an average yield of 94 bushels. The farm business was so arranged on these ten good farms that every man and every horse was able to cover from ten to twenty per



**WON  
HIGHEST  
AWARD**

PANAMA-PACIFIC  
INTERNATIONAL  
EXPOSITION  
SAN FRANCISCO  
1915



# Eight Feet Wide, or Better



**International Harvester  
Spreader  
Low Corn King  
Low Cloverleaf**

**ONCE** you have seen both kinds of work you will say: "There is certainly a wide gulf between the ordinary spreader and the modern IHC machine, with its good, wide-spreading device. Give me the up-to-date, time and labor-saving spreader."

**International Harvester spreaders—Low Corn King and Low Cloverleaf**—are made with wide spreaders that throw the manure out in a wide, even spread, and broken up into fine particles by the disks that give it a second beating. In this condition the soil takes up quickly and evenly the fertilizing elements.

Though they are narrow, conveniently handled spreaders, easy to drive right into stables for loading, they spread to a width of 8 feet, or better. This cuts the spreading time in half, increases the tractive power of the spreader by keeping the wheels off the slippery manure, and gives you the best machine made for top dressing. **IHC spreaders** are simply built, and very strong. They are low for easy loading. They are built in sizes to suit any buyer, and they do work that is uniformly satisfactory.

Be sure to see the **IHC dealer** who can sell you a **Low Corn King** or **Low Cloverleaf**—or write us for catalogue.



**International Harvester Company of America**  
(INCORPORATED)

Crawford, Neb.   Denver, Col.   Helena, Mont.   Portland, Ore.  
San Francisco, Cal.   Spokane, Wash.   Salt Lake City, Utah





# Popular otato --lanter

AT A  
POPULAR PRICE

With the great variety of sizes of pieces used for potato seed it has been found impossible to design MACHINERY to do anything like accurate work in dropping the seed at the desired distances and to deliver each and every piece into the ground uninjured and certain to sprout.

With a **KEYSTONE Hand-Drop Planter** this uncertainty has been entirely overcome and with this machine there is neither waste of expensive seed nor high-priced land. Strong, durable, simple; it is the ideal machine for the practical potato raiser.

Send for Catalog.  
**A. J. PLATT, MFG. Sterling, Ill.**  
**MILLER-CAHOON CO.**  
General Agents  
Idaho Falls, Idaho—Murray, Utah.

cent more ground than the average.

As a result of these methods, the ten farms mentioned showed an average labor income of nearly \$1400 while the average man in the locality had a labor income of only \$414. This is all the more striking when one considers that a man's labor income is not merely what he makes above ex-

# Cut the Cost



**Martin**  
FARM DITCHER  
AND ROAD GRADER

# Of Ditching

Drainage and irrigation ditches are easily made and cleaned out with this improved light draft ditching machine. Makes V-shaped ditch with a slope of 45 degrees—sides won't cave in. Unequaled for hill-side work, road grading, terracing, building rice levees and borders. Reversible—easy to operate.

**All Steel, Simple, Practical**

No wheels or levers to break or get out of fix. Lasts a lifetime. Quickly pays for itself. Price only one-fifth of big clumsy machines—does same work. Thousands of satisfied users throughout the United States.

**Sold On 10 Days' Trial**

with money-back guarantee. Write today for free illustrated booklet and full particulars.

**OWENSBORO DITCHER & GRADER CO., Inc.**  
Western Branch  
248 Evans Block.   Denver, Col.

penses, but is what is left as pay for his year's time over interest on his investment, which in the case of the larger farms of the ten men mentioned would be a heavier charge than the average.





Combined with the  
Deseret Farmer and Rocky Mountain Farming.  
Established 1904

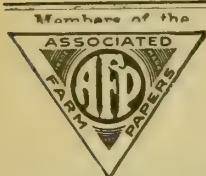
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Lehi, Utah, Kirkham Building.  
Our office at Salt Lake City, Utah,  
is at 712 McIntyre Building.



New York Office 5th Ave. Bldg.  
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**Change in Address**—When ordering a change in the address, subscribers should be sure to give their former as well as their present address, otherwise the address cannot be changed. This is a matter of importance to you and to us.

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#### OFFICIAL ORGAN

Utah Horticultural Society, Utah State Dairymen's Association, Utah State Bee Keepers' Association, Bear River Valley Farmers' Protective and Commercial Association, Agricultural College Extension Department and Utah State Fair Association, Utah-Idaho Millers' and Grain Dealers' Association, Utah Fruit Growers Association.

#### OUR GUARANTEE

We guarantee every subscriber against loss thru dishonesty or attempted swindle by any advertiser in this publication. We do not attempt, however, to adjust trifling differences between the subscribers and honest, responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within thirty days from date of the transaction, and the subscriber must have mentioned Utah Farmer when writing the advertiser.

A nail in time saves nine.

A reading farmer is a progressive farmer.

A broken harness may mean a runaway.

The best place for manure is on the land.

If nothing is produced, nothing can be sold.

Snow in the mountains means water in the canals.

A gallon of water in the soil is worth two in the river.

Manure that has heated is like coal that has been burned.

Haste in covering the machinery prevents waste by rust.

Why leave things scattered over the entire farm when it is easier to find what is wanted if it has a regular place.

It is a good thing to clean up the stable and barn. Sweep down the cobwebs and dust, then whitewash them.

Look over your machinery and see if it is in proper shape for spring work, if not, now is the time to put it in shape.

How long is it since you sharpened that knife for your wife? Aren't you ashamed of the way you let her work away with such a "stick"? Do it now.

Don't bring your horses home sweating, and turn them out in the wet and cold. Provide some means of protection and comfort under such conditions.

During these long winter evenings, plan your work for the coming year. If you will do this you will find that you will be able to get better results from your work.

Use plenty of straw for bedding the live-stock, it will make them more comfortable and will increase the manure supply for your farm. In each case it is profitable. Try it.

You can not guess any where near as close to the amount of milk your cows gives as a set of scales can. Try the scales to try the cows. Don't guess but know what each cow is giving.

The better your sire the better your calves, lambs or colts. The better the sire the more money you can get for them. It is a good investment when you buy a good sire, of course, providing you have use for one.

Paragraph writing is not anything new. Solomon was very clever in the matter of stating much in few words. Here is one of his that we should memorize. "Where no wood is, there the fire goeth out; so where there is no tale bearer the strife ceaseth."

#### WE ARE NOT ALWAYS TO BLAME.

One of our subscribers the other day asked our representative why we did not say something about such and such a place. As a paper we try to say something about every part of the state. When you have something good, why don't you send it in? With our limited funds we are not able to visit all parts of the state yet we hope to visit more this year.

Don't be afraid to write us telling about your experiences and what the farmers in your locality are doing. If you have troubles tell them to us we may be able to help you. If you are making a success, write us telling of your experience and help others to profit by your success. We would like to here from more farmers. The columns of the Utah Farmer are open to you. It is up to you to help in this matter.

#### THE DAYS OF REPAIR.

These are the days when everything around the farm should be thoroughly gone over and put into a good state of repair. During the busy days of seedtime and harvest it is often necessary, on account of the pressure of other work, to allow things to run down. A buckle is broken off from the harness, a bolt is lost out of the wagon, a gate hinge is broken, a window pane is knocked out, or a board on the stable is broken. These may be fixed in a temporary fashion at the time, but they should be made as good as new or the farm and its equipment will gradually run down. During the winter days, many hours are available for little-odd jobs which may be left undone because they are

not thought about. Would it not be a good thing to go over the entire place with a pencil and paper and make a list of everything that needs doing? If such a list is on hand, the jobs can best be fitted into the time that is available, and by spring everything can be put into tip-top shape.

#### TAKE STOCK OF THE FARM.

At this time of year, merchants everywhere are taking stock of their goods in order to find out what the profits of the year have been and to see what is needed for the coming season. Something of this kind is necessary in every kind of business. Since farming is rapidly developing into an up-to-date business, it must fall into line and adopt such business methods as the taking of an inventory. In the old days when farming was merely a hit-and-miss kind of occupation, it was not thought necessary to use business methods; but now that competition is growing keener and men of business training are establishing themselves on the land, modern business methods must be adopted by all who hope to succeed. The taking of an inventory each year is the first step toward applying business to farming.

The latter part of the winter makes a good time for the annual stock taking, since at that time other work is not rushing, most of the products of the previous year are sold, and supplies and equipment of the coming season have not yet been purchased.

#### PAINT YOUR BUILDINGS.

While riding on the train the other day I was in conversation with a traveling man. In passing many farm homes he drew my attention to the fact that many of them had never been painted since the time they were built, and some had never been painted at all, while few of the barns or out buildings had received any paint. He compared our conditions with those of the Eastern States through which he had just recently past, and showed what a difference there was in the matter of keeping the homes and buildings painted. Then, he told me an incident of a man who owned a home built of lumber, which he tried to sell for \$2800.00, for several months he had made this offer, but was unable to find a buyer. His neighbor took an option on the place for six months at \$2800.00. This man spent \$150.00 in painting the buildings, and made a sale of the place for \$3600.00 within thirty days after it was painted. The man with the option seemed to think that there was value in having our buildings painted.

We do not think that this could be repeated with each newly painted home, but we do believe that there is value and profit in spending a little time and money in keeping our homes, barns, and out buildings painted.

The next time you take a trip through the country, notice how few buildings there are that have received a recent coat of paint. You may become converted to the value of a little paint, and as a result of it, may use a little of your time during the winter months in painting some of your buildings.

Paint can be secured ready mixed, or you can mix it yourself, and if you follow the simple directions it does not need an expert to put it on your buildings.



## DUCK BACK Harness OIL



### The Healer

of dry Harnesses, provided they are not too far gone. An unequaled preserver of leather; keeps the pores closed to dust, dirt, dampness and other destructive elements. Your dealer sells it.

**Utah Oil Refining Co.**

Refiners

Salt Lake City, Utah.

## LUMBER SHINGLES DOORS WINDOWS MOULDINGS

FROM THE MILL  
DIRECT TO YOU.

GET

"DIRECT FROM THE  
MILL PRICES"  
BEFORE YOU BUILD

No Money Required  
Until Delivery is Made.

**The Miller Lumber  
Co.**

307 New House Bldg.  
Salt Lake City, Utah.

### AGRICULTURE LESSON

Prof. J. C. Hogenson.

#### Summary of Soil Fertility.

By a fertile soil we mean one that is capable of producing remunerative crops. The following are some of the factors which contribute toward keeping a soil fertile.

1st. A soil to be fertile must have good texture. It must be loose and friable so that moisture, air can easily pass downward, upward or from side to side between the soil particles.

2nd. A soil must have a sufficient quantity of available moisture for plants to use when they need it.

3rd. A soil must have a sufficient amount and variety of plant food for plants to grow normally.

4th. A soil must possess humus from which much plant food is made and upon which bacteria thrive.

5th. A soil must contain a certain amount of heat before plants will grow in it.

6th. A soil must contain a certain amount of air in order to allow chemical changes to go on and to supply oxygen to the nitrifying bacteria and nitrogen to the nodule-forming bacteria.

7th. Soil must be supplied with bacteria to make available much of the plant food found in the soil.

Review carefully each of the above mentioned topics in the lessons previously published in the Farmer.

### DRY-FARMS.

Your attention is called to the fact that the office of the Extension Specialist in Dry-Farming for the Agricultural College has been instituted to meet your needs in every way possible. You are invited to write your problems and submit them to us. If you need help or advice in the operation, equipping, organizing, developing or even selecting your dry-farm—if you want to be advised on the crops to grow in your section, the methods of growing them; or if you have some choice stock, good for seed, or you wish to know where to procure the best dry-farm seeds of all kinds, write to this office and we will try and be of service to you.

We can advise you where you can get many of the dry-farm seeds of good quality and at reasonable prices. Many of our dry-farmers have some choice seeds that we don't know of. If they will list such seeds with this office, stating quantities and prices they wish, we will try and find them customers. We are now wanting to know where we can get dry-land potatoes free from disease, Sixty Day oats, New Zealand Wheat, Soudan Grass. We know of some fine quality Tepary Beans grown under very dry conditions in Utah that should have distribution for planting this year on some of our warm soils. They have every promise of making good and we would like to have a number of the dry-farmers plant limited areas and further try them out. Soudan Grass also should be given a fair trial in various parts of the state. It has made some splendid yields in the south where the climate is warm.

If you have seeds of any kind to sell, report them to this office; if you desire to be informed where to get dry-farm seeds of all kinds with merit in them, write us. We perhaps can tell you where to get the best and save you some money. If you wish to market some dry-farm products, we perhaps can advise you where to obtain the best prices. This office

aims to be alive to your interests in every way and is anxious to serve you and to help you succeed.

Address all communications to  
J. W. PAXMAN,  
Extension Specialist in Dry-Farming  
Nephi, Utah.

### NAME YOUR FARM OR YOUR HOME.

Alexander Lofgreen.

It is an excellent idea to name your farm or ranch, your home or cottage. The selecting of a suitable name is not only a benefit to you personally, but will, no doubt, cause others to follow your example. All this gives an air of distinction to the community in which you live, that other neighborhoods will first envy, then strive to excel. It is a good advertisement for a community and brings about a better local spirit.

In selecting a name for farm, home or ranch, an appropriate one should be used, with the owner's name applied or worked in some way. Sometimes names are selected which are either misleading or have no meaning whatsoever as to the farm.

Try to select a name that will not generally be used so as to avoid duplicating. The difficulty in selecting seems to be in the wealth of material which there is to choose from.

A name gives charm and individuality to your home and a sense of permanence that you have never felt before. You realize that you are settled permanently in this spot and you take a new interest in making it as beautiful as possible.

Names may be divided into several classes according to the way they are suggested. To give it a personal touch such names as Adams Ranch, Smith's Poultry Farm, Jones Seed Farm, Johnson Duroc Ranch, Woods' Wheat Farm or take combination of two names Will and Ada and call it Willada Place.

In allowing the natural surrounding to assist in selecting we can choose Grove Farm Dairy, Alfalfa Fields, Mountain View, Airy Hill, Airy Knoll, Arrowdale, Altamont, Avondale, Breezy Point, Bannerland, Clover Crest, Cloverdale, Daisy Meadow, Deer Lodge, Dairy Downs, Edgewood, Elmendorf, Echo Glen, Echo Grove, Excelsior, Eureka, Fairfield, Fairview, Fountain Home, Glendale, Grassland, Hawthorn, Homestead, Hazelnook, Haycroft, Jerseyland, Lyndel, Lawnview, Morning Glory, Meadows, Northwood, North Star, Oaklawn, Overview, Osage, Poplar Lane, Rockwood, Sunset, Sunrise, The Knolls, Willowdale, Woodland, Woodside, Woodlawn, Westwood, Willow Glen, Willow Lane.

If you live near the water, by all means consider this feature in choosing a name. Here are some suggestions: Meadowbrook, Brooklawn, The Breakers, Springlawn, Shadowbrook, The Ripples, Brookbank, River Bend Farm, Waternook, Brookby Farm, Brookside, Edgewater, Hillbrook, Brookside, Brookdale, Branching Brook, Clearbrook, Lakeside, Lakeview, Lakewood, Riverdale, Riverside, Stillwaters, South Shore, Clearcreek, Springcreek and many others.

Names chosen from nearby trees are pleasing and popular: The Avenue, Evergreen, Elmwood, The Orchards, Greenwood, Twin Oaks, Lone Pine, Woodlands, Elmknoll,

## Crystal Purity

Sugar made at home is 100 per cent pure. It is cheaper than the foreign kind. Table and Preserving Sugar is suited for the table, for cooking, baking, canning, preserving, candy making and other purposes.

ASK FOR TABLE  
AND PRESERVING  
SUGAR.

Oakdale, The Maples, Maple Dell, Hickory Farm, Laurel Dell, Four Oaks, Hickory Grove, Big Tree Farm, Cedar Hill, Cedarcrest, The Poplars, The Palms, Fruitlands, Forest Home, Hazel Wood, Live Oaks, Beechwood, Cedarcrests, Elmhurst, Elmwood, Forest Hill, Fair Oaks, Maple Grove, Pinehurst, Pine Ridge, Willows, Wildwood, Cottonwoods, Oak Grove, Oak Park.

The choice is easy if you wish to consider the view of the character of land surrounding your home: Ocean View, The Crest, Uplands, Hill View, Hill Crest, Wayside Cottage, Rosecliff, Hilltop, Knollcrest, The Terrace, Ridgecrest, Bay View, Longmeadow, Green Hill, Meadowsweet, Hillandale, Undercliff, Valley View Farm, Fairview Cottage, Black Rocks, Bloomingdale Glens, Cragmore Cottage, Lakeview, Foothill Ranch, Glen Echo, Monte Vista, Eagleview, Grandview, Plainview, Sunnyslope.

Any of these names can easily be changed a little to suit the individual surroundings of the home. Vines or shrubbery often suggest appropriate names: Lilac Lodge, Fernbank, Briar Cottage, Green Hedge, Ivy Lodge, Green Acres, Hazel Dell, Green Lane and Rose Cottage.

Cultivated features offer many suggestions: Roselawn, Cloverlea, Shady Lawn, Sunnyside Cottage, Fairlea, Clovernook, Alderlawn, Rosemead, The Blossoms and Garden Villa.

Many prefer to consider the house itself and to choose a characteristic name from it,—as Gray Gables, Brown Cottage, Queen Anne Cottage, Three Towers, Stone Chimney, Greystone, Cobblehack or Halfway Cottage.

For large estates there are more pretentious names: Broadacres, Terrace Grove, Wildfield Farm, Greenwood Manor, Rose Court, Caribou, Lodge and Maple Park.

From these or a combination of any you can think of or select a name that is in keeping or in harmony with your farm and surroundings. After the name is selected then let others know what you have chosen and make it a standard, the products coming from it are always the very best in this way a name will soon become an asset to you.

It is worth while to grow some evergreens about the place to get the beautiful effect of the snow on their branches after a snow storm.

Annual Farm and Home Conventions  
Utah Agricultural College Logan,  
Utah, Jan. 24 to Feb. 5th.

For the above occasion the Salt Lake Route will sell excursion tickets from all Utah stations to Logan, Utah, January 22-23-24-28-29 and 30th. Tickets good returning until February 7th. adv.



## THE HOME

### COLIC

Gertrude Tobiason.

The most common trouble that a mother has to contend with in her babe is colic.

Let us see what causes it first and then we can best tell how to treat it. In a normal babe mothers are free from care and worry of it, and it cries from other causes than colic. A great many mothers think that a babe must suffer and cry with colic for the first three months of its life. This is not true. To begin with, the mother has a great deal to do with her babe's condition. In nearly every case a new mother, with her first babe, feels incompetent in caring for it and a great many times a babe cries because of this. Now to explain: When a mother worries and frets over everything it effects her general condition and of course has a bad effect on the milk, which in turn causes troubles with her babe. The most common is colic. To begin with a mother should try, for the sake of her babe's health, to be calm and not to worry. Another thing which will do the same damage to the milk is over heating the body and subsequently the milk will be in the same condition. Never nurse a child when the system is all tired out with hard labor. Rest for a half an hour before nursing. Often mothers will think that they will rest and feed the babe at the same time, but that is a mistake. Often, after nursing the babe vomits and then is cross and the mother gives it more, why not wait a short time until the mother has rested, even if the child is given some water to quiet it for the time?

## "Utah-Idaho"

—This compound word embraces sweetness and purity. When ordering Sugar, remember that the compound word "Utah-Idaho" means the standard of sugar perfection. No other sugar equals it in purity, sweetness and food content.

Discriminating people who are particular about the things they eat and conditions under which foods are produced and handled, always order Utah-Idaho Sugar.

This sugar is as good as sugar can be made, and is manufactured in the most healthful section in the world, under ideal sanitary conditions. Ask your grocer for it.

### UTAH-IDAHO SUGAR

ABSOLUTELY PURE

The Utah-Idaho Sugar Company recommends attendance at the Annual Farm and Home Conventions to be held at Monroe, La., January 10 to 22, Logan, Utah, January 24 to February 5, Cedar City, Utah, February 6 to 16.

Feeding irregularly is another chief cause for colic and if by regular feeding and not too quickly, not too much, colic can be prevented, each mother should have a babe that is a comfort and a blessing, instead of a worry.

Babes should feed on an average of every two and one-half hours for twenty minutes during the day and only during the first month of its life should it feed twice in the night. After four weeks one feeding at night is all that is necessary and for the sake of both mother and child the night nursings should be omitted as soon as possible.

Nursing all night long will give them colic and make them restless both day and night. Mothers will recall this to be a fact.

At the birth of the child, if the mother is properly cared for and has the right kind of feeding from the beginning there is really nothing that a mother will have to deprive herself of; if she waits until the babe is older, then after some food she takes may cause colic. Get the babe used to it early and by keeping both the mother's and babe's bowels open freely colic will be a thing of the past.

The diet should be of a general nature and by drinking plenty of water and giving the babe the same, a great many troubles may be aborted in the beginning and a babe free from colic in the bargain.

So much for preventatives. Now the first thing to do is a colicky babe is to open the bowels well with either a laxative or an enema, warm soap suds with the froth blown off, and a clear water to rinse out the soap. Warm applications to the abdomen may give great relief. A warm foot bath and warm drinks, such as the old fashioned catnip tea, this will do wonders, meantime, it acts as a laxative and makes the kidneys act well. The best thing to use in giving a babe an enema is the ordinary ear syringe, the rubber being soft, it cannot hurt the mucus membrane of the bowel. Be careful in giving enemas that the syringe is full of water and no air in it, otherwise the going in will not relieve but aggravate the condition. Always dip the end of the rubber in vaseline or oil before using. Do not be afraid to wash out the bowels with warm water.

In giving peppermint for colic, do not make it too strong, or it will choke the babe. Use one drop of the essence of peppermint in a cup of warm water and give the child all it will take.

Another very good remedy is asafetida, one to six drops in two tablespoons of warm water. Catnip and fennel, one teaspoonful to two or three teaspoons of hot water. Another good anti colic is one teaspoonful of brandy in eight of water. Some parents may object to this; it cannot hurt the child and it will not give the child a taste for brandy later on if not continued after the colic is over. Always cuddle the babe up on the shoulder, it often helps after giving the different remedies to remove the gas, if one position does not do try another.

A dose of castor oil occasionally followed by olive oil for a few days is

## GREATEST TWO WEEKS OF UTAH'S YEAR

JANUARY 24—FEBRUARY 5, 1916

Just at the time the Farmer and his Wife need a vacation.

## Farmers' Round-Up

AND

## Housekeepers' Conference

AT THE

## Utah Agricultural College

Logan, Utah

The most notable annual convention held in the Inter-Mountain States.

Progressive Farmers, Home-makers, State Scientists and Educators will be in attendance.

Progressive Farmers, Home-makers, Scientists on Utah Farming and Stock Raising which aggregate \$200,000,000 and on the various phases of Home Management.

### Special Emphasis will be placed upon:

How to Increase Farm Profits.  
How to Improve Methods of Marketing.  
Health and Sanitation in the farm Home.

### Opportunity will be given for laboratory work in:

Floriculture—in greenhouse.  
Poultry—in poultry plant.  
Farm Repair Work and Horseshoeing—in shops.  
Veterinary Practice—in Veterinary hospital.  
Potato and Grain Diseases—in Botany laboratory.  
Judging Agricultural Products—in Agricultural laboratories.  
Home Nursing—in Women's Building.  
Dress making and Millinery—in Women's Building.

Registration Fee, \$1.00. Day Nursery in Gymnasium.

excellent (one teaspoon of castor oil, followed by one teaspoon of olive oil each morning after). Cascara (directions on the bottle) can be taken to good advantage.

By keeping the food from fermenting, causing gas to gather in the stomach and bowels, keep bowels well open, and do not give any food to the nursing child. When a child is ready to eat the teeth and all the digestive powers are ready to receive it, but until these are in good condition do not

give it solid food or a mother will have a colicky babe and a child with indigestion, and a man with a weak digestive system. One reason for a great many doctor's bills in an adult is an impaired digestive tract and this is often caused by unwise feeding during infancy and childhood, before the organs are developed sufficiently to care for the work they are given to do.

There is one very important thing to remember when a babe has colic.



That is never give it paregoric or any of the soothing syrups, because they contain opium and alcohol and the child is apt to get an overdose and result fatally. Paregoric is alright in its place, but its place is not in the home to be used for babe's colic. If none of the above remedies help a doctor will have to be called and help you, but if by persistent effort these rational treatments are carried out, the relief will be certain.

#### FOOD FACTS.

Blanche Cooper.

Protein, fat and carbohydrates are burned in the body and yield energy for the support of its activities.

Proteins and the ash constituents are used as building materials.

Water and the ash constituents or mineral salts regulate the body processes.

The unit for measuring food values is the calorie or heat unit.

Of the total number of food units taken by the individual, approximately from 10 per cent to 15 per cent should be in the form of proteins, remaining 85 per cent to 90 per cent in the form of fat, starch and sugar.

The number of food units needed by the body can be determined for each individual and for each family or collection of individuals.

A standard of food units can be worked out for the individual family upon the following information:

1. The kind of work being done by each member of the family.

2. The weight, height, age and sex of each member of the family.

A well balanced diet contains a representative of each of the five food stuffs properly proportioned to meet the body need, also some relish in the form of pickles, jelly, mint, sauce, celery, olives, etc.

#### Food Value of The Basis of Edible Portion.

Food Materials	Protein Percent	Fuel Value per pound Calories
<b>Nuts</b>		
Pine nuts (Frignolas)	33.9	2845
Peanut butter	29.3	2825
Peanuts	25.8	2560
Pistachio	22.8	3020
Alm	21.0	3030
Brazil	17.0	3265
Filberts	15.6	3290
<b>Legumes</b>		
Lentils	25.7	1581
Peas dried	24.6	1612
Beans dried	22.5	1564
Beans dried frigoles	21.9	1633
Beans dried lima	18.1	1586
<b>Cheese</b>		
American skimmed	31.5	1320
Swiss	27.6	2010
American full cream	25.9	1950
Roquefort	22.6	1700
Cottage	20.9	510
Neul chatel	18.7	1530
Milk whole	3.3	325
<b>Eggs</b>		
Goose	13.8	829
Chicken	13.4	672
Turkey	13.4	700
Duck	13.3	835
<b>Beef</b>		
Foreshank, stew	20.7	719
Round steak	20.5	812
Round potroast	20.5	812
Neck stew	20.0	894
Flank steak	19.9	840
Rump roast	16.6	938
Sirloin steak	18.9	1080
Chuck steak	18.8	892
Porterhouse steak	18.6	1230
Prime rib roast	18.4	935
<b>Veal</b>		
Leg roast	20.5	649
Loin chops	19.4	770
<b>Mutton</b>		
Leg roast	18.2	1070
Loin chops	15.9	1642
<b>Lamb</b>		
Leg roast	18.5	1022
Loin chops	17.6	1495
<b>Pork</b>		
Ham fresh, lean	24.3	1042
Loin chops, lean	18.7	1144
<b>Chicken</b>		
Broilers	21.6	492
Fowls	19.0	1016
Goose, young	16.3	1774
Turkey	10.6	1318
<b>Fish</b>		
Salmon	21.2	922
Trout	18.9	434
Halibut	18.4	550
<b>Shell fish</b>		
Lobster	16.4	379
Clam	10.2	332
Oyster	6.0	222
<b>Fat</b>		
Lard	0.0	4220
Vegetable oils	0.0	4220
Butter	1.0	3605
Cocoanut, prepared	6.5	3125
<b>Pork side meat</b>		
salted	7.2	3110
<b>Pork side meat</b>		
fresh	6.9	2878
Chocolate	12.9	2860
Olives, green	1.1	1400
Olives, ripe	1.7	1200
Cream (Nuts)	2.5	910
<b>(Fat Meats)</b>		

(Continued on page 12)

## Are You Satisfied

with your Work Shirts?

## No?

Then why don't you try **Scowcroft's Maderite-Coat Style Work Shirt?** It has a bunch of improvements designed to overcome all the "Kicks" you have ever made with Work Shirts. You've really got to wear the "Maderite" to realize how a Work Shirt should be made to give the maximum service and satisfaction.

Insist on your dealer showing you Scowcroft's "Maderite" Work Shirts.

**JNO. SCOWCROFT'S and SONS CO.**

Manufacturers.  
Ogden, Utah.

# One Register

(Patented)

## Heats Your Entire House

(Copyright 1915 by the Monitor Stove & Range Co.)

Why pay for furnace pipes you don't need? The Caloric Pipeless Furnace makes pipes and flues unnecessary. It has just one register. Heat circulates through the entire house, giving upstairs, downstairs and halls the same degree of warmth. There is no danger of catching cold by going through rooms of varying temperature.

You save money on installation because all you have to do is put **Caloric Pipeless Furnace** in your cellar and cut a hole in the floor immediately above for the only register that is required. You do not have to cut a lot of holes in your house and spend time and money putting in pipes. Even if your house is already built you will find it easy to put in the



### PIPELESS CALORIC FURNACE

TRADE MARK

The Caloric Pipeless Furnace is guaranteed to save 35% of your fuel. This is because there are no pipes to absorb heat, and our special double ribbed firepot has 600 square inches greater heat radiation. Our single register furnace increases the heating capacity 64%. Our guarantee of 35% fuel saving is very conservative. You can pay for the Caloric Pipeless Furnace out of the money you save on fuel.

### Burns Coal, Coke or Wood Economically

This is a hot air furnace and you do not have to bother keeping water in a boiler. Our firepot is guaranteed for five years. The Caloric Pipeless Furnace produces a healthful heat, because the warmed air is moist and every room and hall in the house is heated to equal temperature. It is the one furnace that will not spoil produce in your basement. It lessens fire danger, which is an important consideration, especially where there are children.

### Our Strong Guarantee

You get this furnace at our risk. We guarantee its results. We freely offer to let you put the Caloric Pipeless Furnace in your house and give it a fair test. If quality and material are not up to our guarantee—if the Caloric Pipeless Furnace is not as represented, we will make it right at any time within a year.

**FREE BOOK** tells all about the Caloric Pipeless Furnace. Shows why you can heat your entire house comfortably with no pipes and only one register. The Caloric dealer in your town will gladly demonstrate this furnace. If there is no dealer, write for this free book and get details of our protective guarantee.

**THE MONITOR STOVE & RANGE CO., 334 East St., CINCINNATI, OHIO**



"Ball-Band" Arctics for men, women and children. Red Ball on the sole.

### All Over America Men Look for the Red Ball

Watch the wise farmers you know when they buy their rubber footwear. They ask for "Ball-Band" and look for the Red Ball Trade Mark.

Over eight and one-half million men wear "Ball-Band" Rubber Footwear. Over 50,000 stores sell it. And the reason is that figuring the cost of rubber footwear on the cost per days wear proves "Ball-Band" the cheapest.

## "BALL BAND"

"Ball-Band" boots are vacuum cured. During the vulcanizing this process causes a tremendous pressure on the fabric and rubber and makes the boot one solid piece.

**Free Booklet "More Days Wear"** tells how to treat your footwear so as to get the most out of it. Write for it. If your footwear merchant doesn't sell "Ball-Band" we will see that you are supplied.

**Something New:** "Ball-Band" Light Weight Rubbers for street wear in Men's, Women's and Children's sizes. They are "Ball-Band" Quality and Value. Look for the Red Ball on the sole.

**MISHAWAKA WOOLEN MFG. CO.**  
370 Water Street, Mishawaka, Ind.

*"The House That Pays Millions for Quality"*

### A GOOD BUY FOR ONE DOLLAR

Can you think of something that will be more helpful to you than a weekly visit of the Utah Farmer. Brimful of good sound advice, helpful suggestions on every phase of farming and farm life. Our 800 pages of good reading for one dollar. Comes 52 times during the year. Renew your subscription today.



## FOOD FACTS.

(Continued from page 11)

Food Materials	Protein Percent	Fuel Value per pound Calories
Carbohydrates		
Starches, sugar, etc.		
Candy	0.0	1743
Sugar, beet	0.0	1814
Starch, cornstarch	0.0	1635
Tapioca	0.4	1608
Sugar, maple	0.0	1502
Honey	0.4	1480
Molasses, cane	2.4	1300
Syrup, maple	0.0	1295
Breakfast cereals		
Oat preparation	16.1	1811
Wheat preparation	13.4	1648
Corn preparation	9.2	1620
Barley, pearled	8.5	1615
Rice	8.0	1591
Flour, meal		
Wheat, whole	1.96	1653
Wheat, graham	2.02	1680
Wheat, high patent	1.92	1640
Corn meal	9.2	1620
Rye	6.8	1588
Buckwheat	6.4	1577
Wheat preparations		
Macaroni	13.4	1625
Noodles	11.7	1625
Spaghetti	21.1	1620
Vermicelli	10.9	1587
Hominy	8.3	1608
Vegetables fresh		
Potatoes, sweet	1.8	558
Beans, lima fresh	7.1	557
Corn, green	3.1	459
Peas, green	7.0	454
Potatoes, Irish	2.2	378
Parsnips	1.6	294
Fruits		
Dates	2.1	1615
Raisins	2.6	1605
Figs	4.3	1475
Mineral salts and water		
Vegetables fresh.		
Asparagus	1.8	101
Beets	1.6	209
Cabbage	1.6	143
Carrots	1.1	205
Cauliflower	1.8	138
Celery	1.1	84
Cucumber	0.8	79
Egg Plant	1.2	127
Kohl-rabi	2.0	140
Lettuce	1.2	87
Mushroom	3.5	208
Onion	1.6	220
Pumpkin	1.0	117
Radish	1.3	133
Spinach	2.1	109
Squash	1.4	209
Tomato	0.9	104
Turnip	1.3	178
Fruits fresh.		
Apples	0.4	285
Apricots	1.0	263
Bananas	1.3	447
Blackberries	1.3	262
Cherries	1.0	354
Cranberries	0.4	212
Currants	1.5	259
Grapes	1.3	437
Lemon Juice	0.0	178
Mushmelon	0.6	180
Orange	0.8	233
Peaches	0.7	188
Pears	0.6	288
Pineapple	0.4	196
Plums	1.0	383
Raspberries	1.0	247
Prunes	0.9	359
Strawberries	1.0	177
Watermelon	0.4	136

(Percent protein and calorie value of the foods in this table taken largely from Bureau Bulletin No. 28.)

## Squibs From A Successful Farmer

A. H. Relegow.

See that all the stock have good clean dry bedding, it saves feed.

Young stock should have a little grain daily, it promotes growth and they are too value to neglect.

Have a little beet factory of your own next season, plant a few acres of half sugar mangel. Many growers claim they are worth from seven to ten dollars a ton for feeding, and you can easily grow from eighteen to twenty-five tons per acre. A few beets fed daily to milk cows means a good milk flow, also longer figures on your cream check.

For some time past strictly fresh eggs have been selling in Salt Lake markets for 50 cents per dozen. With proper care and feeding young chickens will lay almost as well in winter as in summer. Beef scrap, oyster shell, charcoal with good clean dry quarters are the secrets of winter egg production.

If Hon. Wm. Jennings Bryan can't make a success of politics he certainly can raising potatoes. Recently at the National potato show in Michigan he took first prize on the following varieties, Netted Gems, Idaho Rurals and People's Potato, the later is a new variety of special merit. All the potatoes were free from disease and perfect in type, and grown on Mr. Bryan's Farm near Jerome, Idaho.

Just so long as you prepare a banquet for Mr. Alfalfa weevil just so long will he be with you, sow red clover instead of alfalfa. This is practically weevil proof and produces abundance of forage, and as a money maker for seed production it is much superior to alfalfa, but for the damp moist lands I would recommend alsyke or swedish clover. Both of these clovers can be sown with a nurse crop, that is you can grow a full crop of grain. After the grain is harvested irrigate two or three times a large crop of fall pasture, the next season you will produce a full crop of clover, the first cutting of red clover is done between tenth and fifteenth of June, immediately water. The second crop of the red clover is left for seed, in alsyke clover the first crop is saved for seed, this must be well irrigated as it is shallow rooting and the seed crop is made by middle of July.

Twin Falls County in Idaho raised this season a wonderful crop of clover seeds amounting in dollars and cents to one million six hundred thousand dollars. When we stop to think that nine years ago this was a big field of sage brush, it is hard to believe about such a bumper yield unless a person sees it. However we have thousands of acres in Utah, that are equally as good if not better than the Twin Falls district. I have seen good crops of red and alsyke clover 50 feet above sea level in Oregon and fully as good crops at five thousand feet above sea level in the Teton



# American Fence

AWARDED  
**PANAMA PACIFIC  
GRAND  
PRIZE**  
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## TO-DAY!

so that it will reach us before the end of the month is when you should renew your subscription if you have not already sent it in. There will be so many good things in the Utah Farmer this year that you can not afford to miss a single issue. Send your remittance today. We want to keep up the past reputation of so many of our readers renewing each year. Of course your going to send yours! Our letter tells you all about it. Use the self addressed envelope we enclosed.

Basin in Idaho, but for some unknown reason the farmers of Utah have paid little or no attention to the growing of clover seeds, below I will give the names of a few of the farmers and prices obtained for clover seed, Robert Hays at Buhl harvested eighteen acres white clover seed, which brought \$4781.00. Wm Vogel sold his crop of 80 acres of alsyke for clover and make easy money.



## ORCHARD AND GARDEN

### CARE OF BUSH FRUITS.

Protection from Drying Winds, Snow, and Cold Should be Provided in Fall—Pruning Methods.

Among the farm operations which engage the attention of the small fruit grower in the North during late fall, winter, and early spring are the pruning of the plants and their protection from drying winds, snow, and cold.

#### Currants and Gooseberries.

Both of these fruits have stood without injury the extremes of low temperature and drying winds which prevail in the northern Great Plains region. These fruits, therefore, need no protection against the cold or winds of winter. Sometimes, however, in regions having a heavy snowfall, branches of the currant are broken down by the weight of snow and sleet. This danger may be easily avoided by drawing the branches together and tying them with coarse string. The tying may be done at any time after the leaves fall, but it is better to do this about the time the ground begins to freeze.

This period between the falling of the leaves in autumn and the starting of growth in spring is the season in which currants and gooseberries are pruned. The ideal currant bush at which the pruner should aim has six to eight main branches, while the gooseberry has eight to twelve. None of these branches should be over 3 years old. Two or three of the main branches of the currant and three to four main branches of the gooseberry should be removed each season, the older branches being cut out and a like number of the most vigorous canes of the current season's growth left to take their place. All other young canes and all canes bent to or near the ground should also be removed. If this system is followed each year after the bushes reach the age of 3 years, pruning will be relatively simple and the plantation kept in good condition.

#### Raspberries and Blackberries.

Raspberries and blackberries need winter protection in many parts of the North where low temperatures and drying winds prevail, especially where the snow covering is light. Certain varieties need protection, while others endure the same conditions without injury. Experience will indicate which varieties need this. Where the cold and drying winds are severe, as in the Great Plains region and in Colorado, canes of the tender varieties must be covered with soil. This should be done as late as possible, yet before the ground is frozen.

Some of the soil should be removed from one side of the row either with a hoe or plow, the canes inclined to that side until they are in a horizontal position and then entirely covered with soil to a depth of 2 or 3 inches. As the canes of the blackberry are more brittle than those of the raspberry, they must be bent over with greater care. Often in practice the canes are bent over so that the top is alongside the next hill, some soil thrown over the ends of the canes in order to hold them down, and the remaining parts covered by the use of a spade or by throwing a shallow furrow over the canes with a plow. The canes should be uncovered in spring before the buds start, but not until after all danger of hard freezing is past. Straw and other similar materials have sometimes been used to cover the canes, but are unsatisfactory, as the air circulates through them and does not prevent winter injury.

When the snowfall is heavy throughout the winter, it may cover the canes sufficiently to afford all the protection that is needed. Sometimes, however, in order to be adequately protected by the snow, the canes should be bent over. They may be held in this position by placing a few clods of earth on the tops; or sometimes forked sticks are used to pin them to the ground. In other cases rails or poles are placed across the canes to keep them in a reclining position. The tips, which are the tenderest part of the canes, should be nearest the ground and be best protected.

Usually no pruning is given either the raspberry or blackberry just before or during the winter. When the canes are to be protected with soil, however, all the weaker canes, as well as stronger ones not needed for the crop the following season, should be removed. This thinning out of the canes will reduce the cost of covering. In the spring if the canes of the raspberry are long and are not to be supported by stakes or a trellis, the ends should be cut back. If cut back to a height of 3 feet, the canes should be able to support their crop, keeping the berries out of the dirt. Sometimes when the canes are slender it will be necessary to cut them back to 2½ feet in length. The side branches of the blackberries are usually pruned back in early spring. The length at which the lateral branches should be left depends on the habit of the variety. In some sections and with some varieties no pruning at this time is necessary, and experience in each locality must be the guide as to this.

### MANURE YOUR MEADOWS

During the winter a great deal of manure accumulates around the farm houses. Because of the heavy rains and melting snows it is often difficult to place this manure where it won't wash away and be lost.

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## POULTRY

### WINTERING POULTRY.

Special Care Should Be Given Fowls During Cold Weather to Obtain Best Results.

To obtain good results from a flock of poultry during the winter all houses and coops should be put in good condition, only healthy fowls placed in the buildings, and good care given to the poultry. The houses should be thoroughly cleaned, disinfected, and made tight for winter. If the house has a dirt floor, it is well to remove 3 or 4 inches from the top and substitute fresh gravel or sand. If the floor is cement or wood, remove all litter and dirt and put in 4 or 5 inches of fresh straw or litter. Be sure that the house is tight on three sides and that there is no chance for a draft to strike the hens. If hens roost or are placed in a draft during the fall and winter, colds are sure to develop, which may result in roup and other troubles. The south side, or front, of the poultry house may be left comparatively open, but should be under control, so that the openings may be closed gradually as the weather becomes cold. Have muslin curtains in the front of the house, or leave a window partly open even on the coldest nights to allow some ventilation in the house. Fowls will stand considerable cold air provided it is dry, and ventilation will keep the air thoroughly dry in the house.

The pullets should be brought in off the range and put in winter quarters, but before they are mixed with the older fowls be sure that the hens are banded or that the web of the foot is punched in some way so as to distinguish between the pullets and the hens. In this way the older stock may be culled out whenever it appears desirable, and the young hens kept for further laying. Cull the chickens which are brought into the laying house carefully, and fatten and market all chickens which are small, poorly developed, or in poor condition. These small, poorly developed chickens are apt to catch cold if put in with the other poultry, and develop disease which quickly spread through the flock. Market all surplus cockerels or older male birds which are not desired for breeding or not wanted for a later market.

Feed the grain in a deep litter on the floor and make the hens exercise for all of their grain. The mash may be fed either wet or dry, and should be so regulated that the fowls will get about equal parts of mash and of the scratch grains. It is necessary to give the fowls plenty to eat to get good results, but the birds should always be eager for each feed. In cold weather feed about one-third of the scratch grains in the morning and two-thirds at night. In this way the hens are forced to exercise more than if they receive all the grain they desire at the morning feed. Scratch grains, mash or ground grains, animal protein, green feed, grit and shell should be supplied in the winter. A good scratch mixture may be made of equal parts, by weight, of cracked corn, wheat, and oats; and a mash may be made of two parts corn meal and one part each of wheat bran, wheat middlings, and beef scrap. Green feed, such as cabbages, mangel wurzel

beets, cut alfalfa, or sprouted oats, should be supplied to replace the green feed which the fowls have been securing in the fields; and beef scrap, skim milk, cut green bone, or some similar feed is needed to replace the bugs which the fowls have been getting on the range. Beef scrap or feed of this nature is very essential in securing a good supply of eggs during the winter months.

Clean the dropping boards at least once a week, and spray the roosts with kerosene or some commercial preparation for killing mites once a month during the winter. Have a good supply of sand or dry dirt on hand to use on the dropping boards during the winter.

If any of the birds develop colds, put as much potassium permanganate as will remain on the surface of a dime into gallon of water and keep this mixture in their drinking water for several days, or until the symptoms of the colds have disappeared. Remove any sick birds from the flock as soon as they are noted and treat them in coops by themselves, or kill and bury them if they are not worth treating.

Examine the pullets and nens for lice, and dust thoroughly with a good insect powder or apply a mixture of 2 parts of vaseline and 1 part of mercurial or blue ointment, about the size of a pea, 1 inch below the vent of the bird, rubbing the mixture lightly on the skin. An application of this ointment two or three times a year will keep the fowls free from lice. Where insect powder is used, it should be applied three or four times a year, or oftener if the fowls become infested. Provide a small box in the house partly filled with dry road dust or fine dirt in which the hens may dust, thus helping to keep themselves free from lice.

### VALUE OF GOOD ROADS.

After a great deal of talk and much being written the country is beginning to realize the great importance and true value of good roads. All over the nation great improvements have been made and is still in progress. In truth, we can now say that a good beginning has been made that will prove to be only a forerunner for good roads improvements. It is a good scheme in promoting the road improvement work by the planting and the care of shade trees along the highways for their great beauty and as a help in maintaining the permanency of the roads. Engineers have learned the lesson that a highway overarched with trees at proper distances lasts longer and is more easily kept in order than one that is unshaded. A certain amount of moisture assists in the preservation and usefulness of the surface of the road as well as the material underneath.

As for the beauty and general attractiveness of shaded roads no argument is needed. They are an inspiration and delight to those who travel over them and realize how much they contribute to personal comfort and enjoyment. That they enhance property values wherever established in undisputed.

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EXCURSION RATES TO LOGAN VIA SALT LAKE ROUTE.

Account Annual Farm and Home Conventions at Logan, Utah, the Salt Lake Route will sell excursion tickets from all Utah stations January 22-23-24-28-29 and 30th. Tickets will be good returning until February 7th.

A change to the right dairy ration and proper care may make "two streams of milk flow where but one flew before."

Consider the postage stamp, its value consists in its sticking to a thing until it gets there.—Josh Billings.

"The lucky man is the one who sees and grasps his opportunity."—Old Saying.

HOG RAISING ON THE FARM

In choosing brood sows for the production of pork, it is very important matter to select from prolific family with strong legs and good feet. The individuals selected should be rather rangy, with a straight back, a broad and deep body. It is not a bad plan to notice whether she has 12 well-developed teats. Do not breed them before they are eight months old, but feed them well both before and after breeding, so that they may become vigorous and well developed.

The boar, as is usually said, is half of the herd; therefore, great care must be exercised in his selection. In the first place, he should be a pure-bred sire of whatever breed he is chosen, so that he may correct any faults that may obtain in the sows. Like the sows, he should also come of a prolific and vigorous family, but should be more compactly built than the sows. It is well to have the boar about the same age as the sows.

A record should be kept of the dates of service of the sows, as this saves much trouble at farrowing time, and sometimes may save the lives of many pigs. Feed the sow on a light diet during the first 24 hours, say water into which shorts have been stirred, as the pigs grow older, increase the amount rapidly.

With some sows that are good milkers, however, too much care and attention cannot be bestowed on her at this time, for if she is overfed, she is apt to produce more milk than the pigs can consume, and the result is a feverish condition of the udder which is almost certain to produce scours in the pigs and give them sore mouths; often this gets so bad that the sow, on account of the inflamed condition of the udder, refuses to let the pigs nurse and serious trouble follows. This can be wholly avoided by careful feeding. After the pigs are 10 days old, however, the sow may be fed all she will eat up clean.

Another important point, which is too often neglected, is to keep the bed for the sow with the litter dry; this point seems hardly necessary to mention except for the fact that it is often neglected.—Western Farmer.

Do your cows pay? The scales and Bobcock test should be used to answer this question.



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# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region

OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE

VOLUME XII; No. 26.

LEHI AND SALT LAKE CITY, UTAH

January 29, 1916





# Trade Marks and Advertising

When a manufacturer offers for sale a product that he has confidence in he puts his name, his trade mark, upon it. This is the way the customer has of knowing a certain product, a way to identify it. The first sale is made by advertising and the merits of the article purchased is tested. If he gets satisfaction the second purchase is practically assured.

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VOLUME XII. LEHI, UTAH, SATURDAY, JANUARY 29, 1916 No. 26

## Waste of Feeds

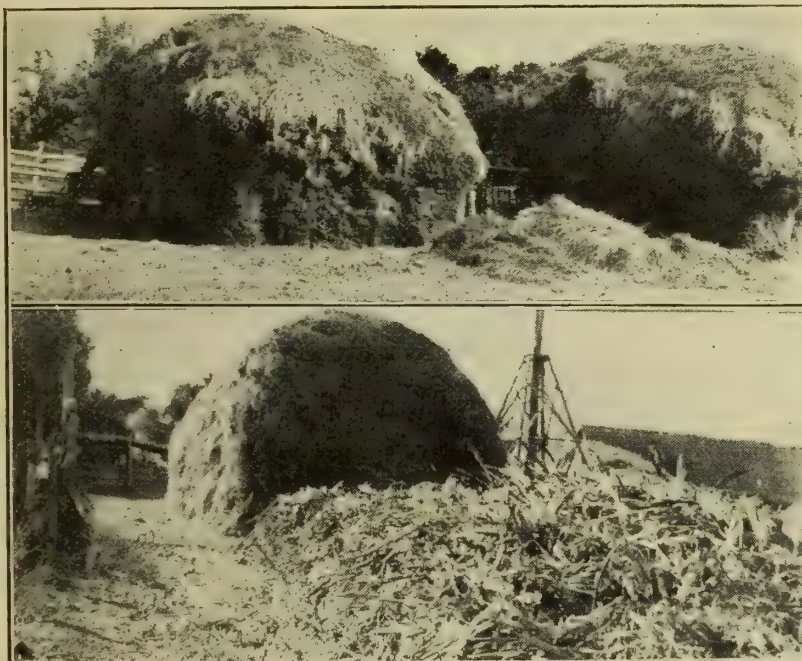
By Ben R. Eldredge.

I was passing through a district of the state where some corn is raised. The corn is cut, hauled to the stack yard, shocked, and after being husked, the fodder is laid in long low piles where the first heavy storm can spoil a great per cent of it. Yet this fodder represents from 30 per cent to 40 per cent of the total feed value of the corn plant. That is, it would amount to that percent if it were placed before the cattle in its best condition. As it now is, even much of that portion that may be placed in the feed racks will be refused by the stock. It is hard, dry and unpalatable. The two pictures shown herewith are splendid arguments for the silo. The amount of labor that was used to place the fodder in the condition shown in our illustration would have placed that corn crop in the silo where every particle of the plant from where it is cut near the ground to the tip of the tassel would be preserved in a palatable and nutritious form and ready to be fed any time that it might be needed during the winter or even the coming summer.

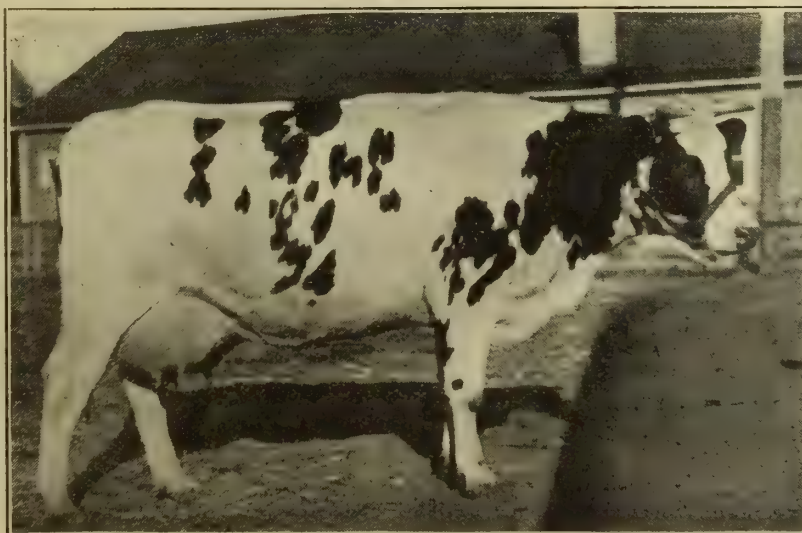
In another district I recently saw ricks of fodder left over from last year. The farmer in this case had taken more than ordinary pains in caring for this part of his crop. The fodder was all tied in bundles and laid upon poles, so that it did not come in contact with the ground, but fodder a year old, even when cared for as this was, has a very small feeding value. It shatters badly when handled and is so exceedingly dry that only a small portion is consumed by the cattle and even that which is consumed is exceedingly difficult of digestion. The corn that goes into the silo can be carried there year after year and will deteriorate scarcely at all. The only waste being a few inches of top layer which spoils in contact with the atmosphere and, even this layer, can be greatly reduced by covering the top with a quantity of cut straw or chaff that is well packed and dampened immediately after the silo filling is finished. In the districts I have spoken of, corn is usually grown and alfalfa is cheap, but there are hundreds of cattle that require winter feeding and a ration composed of corn silage and alfalfa is far better for the growing stock and the dairy cow than alfalfa alone. And it also being more nearly a balanced ration, is more economical than feeding either exclusively.

Another waste of feed is the common practice of turning stock to the stack. Not only do the cattle and

horses tramp down quantities of the hay which is wasted, but they eat more than is required to keep them in thrifty condition and this excess is a tax upon the digestive organs, which lowers the vitality to that extent that such stock are often easily attacked by disease. Doesn't it seem a shame that men will toil to raise and gather a crop and then fail to use ordinary intelligence in feeding it?



A wasteful method of caring for corn fodder. It seems a pity to toil gathering a crop and then not use ordinary intelligence caring and feeding it. A silo would help to take care of the corn.



This heifer owned by the Utah Agricultural College. First calf 9554.0 lbs. milk 357.74 lbs. fat. Seven day record with second calf 16.31 in 7 days.

## Improve Your Markets

Wm. W. Owens, U. A. C.

A heifer owned by the Utah Agricultural College produced 9554 pounds milk containing 357.7 pounds butterfat with her first calf. She paid more than double the market price for everything she consumed.

Do you men who keep cows know that some of them pay you five dollars per ton for hay while others pay fifteen dollars per ton for the same hay? I suspect you must not know, or

you would stop selling to those low bidders. There is only one way to find out—with scales and Babcock tester. For you who think your own judgment sufficient, allow me to quote from Farmer's Bulletin No. 55: A dairyman of wide reputation, president of a State association for years, concluded to adopt the daily milk record, rather because of those who advocated it than of any conviction of needing it himself. His herd was of his own breeding; he had handled every cow from its birth, and he and his sons did the milking. Before beginning the record he made note of the joint opinion of himself and sons as to the half dozen best cows in the herd and an estimate of their season milk yield. When the years record was completed it was found that in order of actual merit the cows actually stood thus: first his fifth; second a cow not on his merit list; third, his fourth; fourth, his first; fifth, his sixth; sixth, like the second; and his second and third still lower on the list. These facts were verified by subsequent records. Still more remarkable, this experienced owner proved literally by the book that about one-fourth of his cows were being kept at an actual loss, while others barely paid their way."

The author has no intention of advising you to keep a daily milk record, he knows you will not do it. For practical purposes making a test of two or three consecutive days every three months is enough to determine the test of a cow. The author figured the average test of sixteen Utah cows which had been officially sampled and tested every month for a year, then he selected the tests of the first, fourth, seventh, and tenth months and found that their average differed only one-tenth of one per cent from the average of the twelve months. No great injustice would have been done any cow had she been tested but four times during the year. The weighing of the milk, however, must be done oftener, morning and night every two weeks would furnish sufficient evidence for or against a cow.

A complete equipment for this work can be had for ten dollars, if you prefer not to make the investment send the composite sample of milk to the nearest high school or to the Agricultural College where it will be tested free of charge. It is of no consequence how you do it, but get it done after some fashion before those "boarder" cows eat up your bank roll.

Only green feeds contain the carotin that makes butter yellow.



## DAIRYING

### HOW TO IMPROVE DAIRY HERD.

O. E. Reed, Kansas Agricultural College.

The dairy cow has been transformed by careful selection and breeding, into a highly specialized or artificial animal. One of the big problems of the breeders of dairy cattle is to select animals that will improve the herd.

A dairyman who is improving a breed of cattle must have a herd characterized by breeding, production, and individuality. In selecting foundation stock it is important that the beginner have these three essentials in mind.

"A good dairy cow must be an economical producer. This means that she must produce large quantities of milk. Experience has proved that the best individual is not always the best producer. Some of the cows that have held the world's record for the production of butter fat have been poor individuals.

#### How Milk Cow Was Developed

"The artificial cow we have today is the result of many years of breeding. The undomesticated cow gave only milk enough to support a calf until it could live on other foods. The cows at that time probably showed little variation in their dairy characteristics.

"After cattle were domesticated and milk became an important article of food, some attention was paid to improving the milking qualities. Some cows through natural variation showed more highly developed milking characteristics and were retained as breeding animals.

"It is a well established law of breeding that when a certain character is developed in a breed of animals more than originally was the case, this acquired character is not transmitted regularly. We often see cows from high producing dams that are poor performers, because the dam was not a well bred cow."

#### Should be From Consistent Family

A well bred animal is a member of a strain or family that has proved its value by being an average consistent producer.

A cow does not have to be a purebred animal to be well bred; that is, she can be well bred even though she is not from a registered sire and dam. Many well bred grade cows

produce 600 pounds of butter in a year, while their purebred stable mates produce only 200 pounds.

The well bred cow can reasonably be expected to transmit her dairy qualities to her offspring, while the calves from a poorly bred cow, even though she is a good producer, will probably be poor milkers.

A well bred cow is one sired by a bull having a large number of high producing daughters. The dam of this cow must be an at least average milker. A bull may have a few high producing daughters, but the average of all may be low.

"I would rather have a cow from a family of medium high producers, than one with a large record if the average record for that strain was low.

#### Selection is Hard Problem

"The selection of the cow on individuality alone is a difficult problem but nevertheless it is the one we usually must employ because records are available in but few cases.

"Where production records have been kept it is usually the poorer animals that are for sale. The average dairyman can select the 300 pound cow from a herd of 100 pound cows, but it is impossible to pick the 600 pound cow from a herd of 300 pound animals."

The dairy breeds are similar but differ in a few essential characteristics. These differences must be firmly fixed in mind and followed in selecting a herd of cows. A uniform herd is the result of the use of care in the selection of foundation stock.

A breeder should try to combine production, breeding, and individuality in mating his animals. This has been done in a number of the best herds in the country.

#### BUHL COW TESTING ASSOCIATION

The rapid progress of the dairy industry in the Twin Falls, Idaho, country is manifested by the organization of the Buhl Pioneer Cow Testing Association. This association has 26 members with a total of 570 cows enrolled. Of these, there are 47 registered Holsteins, 25 registered Jerseys and the remainder grade Holsteins, Jerseys, Guernseys, Ayrshires and Shorthorns.

In this organization, a trained tester is employed who spends a day every month with each of the herds in the association. He weighs and samples the milk from each cow at milking time and figures the amount of roughage and concentrates given each cow. From this days record, he computes the milk and fat production and cost of feed for each cow for the current month.

In Denmark where this work originated, the improvement of dairy cattle is very marked due to these associations, the average annual yield of butter per cow having increased from 12 pounds, in 1884, to 224 pounds in 1908.

There are approximately 200 such associations in the United States and they are gaining rapidly in popularity. Many dairymen who would not go to the trouble of testing their herds themselves, are glad to avail themselves of



The milk  
in the pail  
the cow kicks  
over is lost  
forever

AND the butter-fat that goes into the can through the skim-milk spout of a cheap, inferior or worn-out cream separator is just as surely lost as the milk in the pail the cow kicked over. If you are trying to get along without a cream separator, or with an inferior or worn-out machine, you are losing butter-fat right along and butter-fat is money.

## Get Your DE LAVAL Now—Right Away

every day you use it it will be paying for itself out of its own saving.

If you haven't the spare cash right now that need not hinder your immediate purchase.

We have an arrangement with De Laval agents which makes it possible for any reputable farmer to secure a De Laval on the partial payment plan—a small payment at time of purchase and the balance in several installments, so that a De Laval really pays for itself while you are using it and getting the benefit from it.

Let the De Laval start saving cream for you right now while butter and cream prices are highest. See the nearest De Laval agent at once, or if you do not know him, write us direct for any desired information.

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50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER

the opportunity of using the association.

The first months report of the Buhl Cow Testing Association shows that 45 cows produced 40 pounds or more of butter fat and the average cost of producing this fat was 14½ cents per pound.—E. V. Ellington, Professor of Dairying.

### ROWE'S HOG OILER

NEW IDEA  
Only Oiler made without valves, cylinders or wheels. Can't clog, stick, leak or get out of order. Guaranteed 5 years. Uses Crude or Medicated oil. Kills lice; keeps pens and yards disinfected. One oiler cares for 30 to 50 hogs. \$9.25 delivered 1 gal. oil free. CALKO HOG POWDERS is a hog conditioner and worm expeller. 25 pound sack \$2.00.

HEALTHY HOGS—MORE PROFITS  
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Mention Utah Farmer when you write.

the opportunity of using the association.

The first months report of the Buhl Cow Testing Association shows that 45 cows produced 40 pounds or more of butter fat and the average cost of producing this fat was 14½ cents per pound.—E. V. Ellington, Professor of Dairying.

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Annual Farm and Home Conventions  
Utah Agricultural College Logan,  
Utah, Jan. 24 to Feb. 5th.  
For the above occasion the Salt Lake Route will sell excursion tickets from all Utah stations to Logan, Utah, January 22-23-24-28-29 and 30th. Tickets good returning until February 7th. adv.

Any great transportation of livestock requires the closest attention because it is prolific of disease.

What are a bank's  
resources?

Its capital? Its surplus?  
Its loans and cash? Yes—

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is that tremendous force  
known as REPUTATION,  
without which no financial  
institution or business house  
can hope to endure.

**Walker Brothers  
Bankers**

SALT LAKE CITY





## LIVE STOCK

### HOG-RAISING HINTS.

#### Disadvantages of Low Market May Be Overcome By Timely Breeding and Good Care.

The low prices received for hogs during the past year have been discouraging to some of the hog raisers of the country. The hog should be a paying animal. He requires less labor, less equipment, less capital, makes greater gains on 100 pounds of concentrates, reproduces himself faster and in greater numbers, and returns the money faster than any other farm animal. The fact remains, however, that prices paid for hogs are low and discouraging. In spite of these prices the animal that possesses the above advantages can still lift mortgages for his owner if he will study and apply some of the fundamental principles underlying the business.

To begin with, the best can be made of a poor market by having the hogs ready at the time when they are most wanted by that market. This normally occurs during the spring and again during early fall. The September and October market is usually the highest. How can the farmer take advantage of these facts to the greatest degree? In the first place, the hog wanted by the market usually runs between 175 and 225 lbs. Fortunately this is the most economical weight at which to dispose of the hog. Up to this point his gains are made very cheaply. Beyond 300 pounds it is doubtful if under general conditions feeding can be made a profitable business. The hog if properly fed can readily be put upon the market at 200 pounds in six or seven months. Therefore have the pigs for the September market dropped in the latter part of February or during March. This will require that the breeding of the sows begin about the latter part of October or November first, continuing, if necessary, during the first week in December. The pigs for the April market should be dropped in early September. These pigs can then be weaned before the November breeding season starts. To have the pigs dropped in September it will be necessary to breed the sows during May or early June. Under certain conditions it may be impossible to bring hogs to the 200-pound mark at six months; however, a great effort should be made to attain this goal, as time means money, and the longer hogs are held the greater will be the labor and overhead charges. The cost of feed for maintenance also will be increased.

Further, in connection with the relation of markets to hog raising, it will be noticed in going over the history of some of the leading markets for the last ten years or so that there is a recovery every two to four years. It might be well, therefore, to remember that this is a poor time to close out, as a reaction may be expected and the wise farmer will be ready when it arrives.

#### Breeding, Farrowing, Weaning.

On the average farm there should be radical improvement in breeding and the care of details during farrowing, weaning, etc. There are many complaints throughout the country either of small litters or

else a great mortality in pigs. By keeping the production records of sows and selecting from those that produce and raise large average litters a breeder can raise to its most efficient point the size of his litters. This probably runs between seven and eight to the litter. The hog raiser can prevent losses, other than those caused by disease, by providing proper shelter for the sow at farrowing time. In the South this shelter can be constructed very cheaply, and even in the North it can be provided in most cases at a moderate cost. The farmer should always be present at farrowing time, but should not interfere with the sow unless necessity calls for his assistance. The raiser should always cultivate the confidence of his animals by quiet and humane handling; this care and attention in times of necessity will pay big returns. The pigs upon arrival should be rubbed dry with a gunny sack and quietly removed to a place of safety. For this purpose it is well to provide a covered basket or hamper containing gunny sacks. In cold, damp weather it may be well to warm a brick, wrap it in a gunny sack, and place it in the basket to warm up the new arrivals. If the sow is very long in farrowing it may be well after two or three hours to place the little pigs carefully and quietly where they can get some nourishment and then replace them in the basket until the mother is through.

For twelve hours before farrowing and for 24 hours afterwards the sow should have no feed. During this period all the fresh, clean water that she may desire should be accessible. The water should have the chill taken off. The first feed after farrowing should be very light, preferably a bran mash. The best indicator of the amount of feed necessary for a sow and her pigs is her condition and the condition of the youngsters themselves. The sow should receive enough to keep her and her pigs in a fair condition (not bony), and yet she should not be overfed. Overfeeding of the sow often causes scours in the pigs.

The pigs should be weaned at six or eight weeks of age. By this time they should be eating readily and should be continued for two or three weeks on the same mixture that their mother was receiving, after which the feed can be changed gradually to a growing, fattening ration if the pigs are intended for market. The addition of a little sweet skim milk to their ration at weaning time is especially helpful to young pigs. Castrating should be done a week or ten days before weaning. Spraying does not pay.

#### Feeding.

Pigs make the best use of concentrates. These can be fed in a self-feeder and can be supplemented by various slaughterhouse, bakery, or table by-products, etc. A by-product, to be economical, should be fairly concentrated, should be moderate in price per 100 pounds of nutrients, and should be fresh and free from taint. During the winter leguminous hays fed in addition to the concentrate help reduce the cost of production. In

(Continued on page 9)

## Make Your Dreams Come True



Put aside the wheelbarrow and install a Loudon Litter Carrier.

You can keep your barn cleaner, your stock healthier, yourself and help happier, and get through with this time-killing chore in half the time. A Loudon Litter Carrier changes barn cleaning from man's drudgery to child's play. The powerful worm hoisting gear enables a boy to raise and lower the loaded carrier to any height desired. A pound pull on the chain lifts 40 in the box.



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## FREE Story Books For Children

It's easy to entertain children during these cold, damp, wintry days, with story books which the Royal Baking Company is GIVING to children whose mothers buy Royal Table Queen—"The Perfect Bread." Each book is beautifully illustrated with colored pictures.

NO CASH is necessary to get these books. Mail ten Royal Bread labels or wrappers for each book, with 2 cents for return postage to the Royal Baking Company, Salt Lake City. If you do not want picture books, get a top or a whistle or a "Scout" knife. Your grocer will tell you how many labels for each.

Mothers should save all the labels and wrappers from—

**ROYAL  
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"The Perfect Bread"



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When you answer the advertisements in this paper tell them you saw it in the Farmer. Always buy advertised goods.



## Field and Farm

### FARM-FENCING PROBLEM.

Factors to Consider Are Durability, Economy in Construction, and System Suited to Farm Needs.

Wire fences, are very generally replacing those of stone, wood, and hedge as the latter become unserviceable. Where high-priced land, a scarcity of timber, and high wages for farm labor exist, the farmer can no longer afford to construct any but wire fence. The extent to which this fencing is now being used is shown in a recent report, if the department, of agriculture which contains the results of investigations into the cost of fencing farms.

The general and increasing use of wire for farm fencing in this section has compelled the farmer to consider very seriously what system will be most suitable to his needs. A farm fence, should combine the two qualities of service and economy. To give satisfactory service it must be constructed so as to turn all kinds of stock without injury to them. To be economical it must be built as cheaply as is consistent with durability. The fence that is erected at a low initial cost is not necessarily economical, for it may be shortlived.

In selecting a woven-wire fence, it is preferable to economize by eliminating unnecessary wires rather than by using a lighterweight wire. A fence the spacing in which is too wide to turn swine satisfactorily will prove quite adequate when only cattle, sheep, or horses are to be considered. The farmer, therefore, who keeps no swine can save money by doing away with wires that are not needed. The factor which determines the price of woven-wire fencing is its weight, so that in fences of the same height a wide-spaced fence with comparatively few wires costs less than a narrow-spaced one with more wires. On the other hand, it is becoming generally recognized that the use of heavy wire in fencing is economical. The initial cost of the heavy wire is greater, but its durability is more than sufficient to offset this disadvantage. The labor and other costs in the construction of a fence are practically the same whether a heavy or a light grade of wire is used, but with heavy wire the fence lasts so much longer that this cost of construction is distributed over a much longer time. That this is appreciated by a majority of farmers is indicated by the increase in the percentage of heavy wire that is being sold for fencing purposes.

For the general farm on which all kinds of stock are kept, and on which the rotations practiced call for temporary pastures, the common type of fence now being adopted is one which has approximately 10 line wires and a total height of about 4 feet. The bottom wires are spaced about 3 inches apart. Such a fence constructed from all No. 9 wire with a strand of barbed wire on the top, locust, red, steel, or cement line posts set a rod apart, and ends and braces of the same materials as for the line posts at distances of 40 rods, can be constructed, it is figured, for 93½ cents a rod. This allows a labor cost of 9 cents a rod. This cost of wire itself is estimated at 40 cents,

the line posts at 28 cents, and the ends and braces at 12½ cents a rod. Such a fence is exceptionally durable and should last approximately 22 years. Cheaper fences can, of course, be constructed with less expensive materials. Allowing for repairs, depreciation, and interest at 5 per cent on the investment, the total annual cost of upkeep for a fence such as the one described should be 9 cents per rod. In addition, the interest on the value of the land which the fence occupies, and thus withdraws from tillage or pasture, should be included.

The growing scarcity of timber has already resulted in popularizing wire fencing, is also increasing the cost of posts for these fences, and many ultimately result in a more general adoption of some substitute for a wooden post. The only kinds of timber fence posts which in their natural condition last on an average for more than 15 years are locust, cedar, mulberry, catalpa, and bur oak. The supply of all these is limited, and most of them in the areas where they are not native are high priced.

Farmers are turning their attention to the possibilities of steel and concrete posts. The chief objection to steel posts, that they are bent by heavy stock rubbing against them, may be overcome both by the proper construction of the fence so that the strain in transmitted along the line to the end posts, and also by the use of heavier posts. Concrete posts are commonly believed to be especially durable, but to secure this quality great care must be exercised in the selection of materials and in the construction. Moreover, such posts should not be used for at least a month, or better still, for three months, after they have been removed from the mold. On farms where sand and gravel are available, however, and where the work may be done at a season of the year when the labor might not otherwise be profitably employed, the construction of concrete fence posts is quite feasible. The concrete, however, must not be allowed to freeze.

Still another method of meeting the increasing cost of durable timber for fence posts is the use of preservatives on the cheaper kinds of wood. Creosote is the cheapest and most efficient of common preservatives, and short-lived timbers that are properly treated with it should withstand decay as long as the more durable woods. The treatment is simple and can easily be done on the farm.

Whatever form of fence post is adopted, it must be remembered that it is very poor economy to construct a fence in which the posts will decay before the wire does. In such an event the fence has to be restretched on a new set of posts, the cost of repairs will be considerably increased, and full efficiency will not be obtained from the wire.

"Why didn't you go to the poll to vote?"

"Well," replied the farmer, "after listening carefully to what the candidates had to say about each other, I concluded neither of them was worth harnessing a horse for."

### Profit Makers

A GLANCE at Government reports shows how great a factor potatoes are becoming in Middle West production. Growers know that modern tools are necessary for satisfactory profit. Last year's crop is nearly 60 million short. Seed will be scarce and high. We have a Potato Planter that puts one piece in each place and one only.

### IRON AGE

Potato machinery, garden tools, spraying machinery, etc., are built to give profit making service. Almost any combination you can think of in each line. Eighty years of factory and farm experience behind their manufacture.

Ask your dealer to show them and write us or our representatives: Utah Implement-Vehicle Co., Salt Lake City, for separate booklets fully describing lines in which you are interested.

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## TWO FARMS FOR SALE

At Very Reasonable Prices

First one consists of 160 acres, all well fenced, as well as division fences. 40 acres in pasture land. 80 acres, plowed ready for spring seeding. 40 acres, already seeded with fall grain. Water right—one-half interest in a small creek.

In the other there are two hundred acres, all fenced, good brick house. Practically all seeded in alfalfa. Some of it, one two and three years standing. Individual water right. Plenty of water.

Write or Call

707 Kearns Building  
Salt Lake City, Utah



# SEED GROWERS OPPORTUNITY.

Conditions are very favorable for growing seed the coming year according to Newell S. Robb of the Idaho, Experiment Station.

This is due to existing conditions in Europe which have practically destroyed the seed trade with the continent.

The magnitude of this business has not been realized by the people of this country, not even by the people engaged in the seed trade themselves.

The value of seed imported into this country represents many millions of dollars. During the year 1912-1913 the United States imported from France and German, over \$12,000,000 worth of alfalfa and clover seed. The value of other seeds, as grass, garden and flower seeds, exceeds the above amount.

We are just beginning to realize the situation. The conditions will become more serious during the next few years unless a strenuous effort is made by this country to produce a large portion of the seed than it has heretofore purchased from Europe.

Some varieties of seeds have ceased to be listed by the wholesalers, while others have doubled in price. The same complaint of scarcity and high prices is heard from Canada and South America. The problem is before the country to grow their own seed and establish the seed growing industry in America.

Canada is alive to the situation and is offering financial aid and a bounty to seed growers to help establish the industry in the Dominion.

It has already been demonstrated

that successful seed growing can be carried on in Idaho. It is possible to establish the industry on a still larger scale. Seed growing is one of the most profitable forms of agriculture. The returns per acre from some crops of seeds are almost unbelievable.

It is needless to enumerate the ideal conditions existing over large sections of the state for the production of seeds of many varieties of superior quality. In every instance where seed has been produced in this country, it has been of higher quality than the imported seed, and in turn produces a superior product. The seed growing industry is bound to become established on a much more extensive scale in this country than ever before.

Idaho growers should become fully awakened to the situation, and make a strenuous effort during the next two years to extend and establish the industry, thus insuring larger additional incomes for the farmers of the state.

## TORRENS SYSTEM OF TITLES.

We have been asked a number of times why the Torrens system of titles are not used in Utah. Some of our lawyers have given this subject considerable study and approve the plan, others have abjections. Dean F. B. Mumford of Missouri University has this to say and approves the general plan of the Torrens system as now in use by several of our states.

"I thoroughly agree with Abraham Lincoln's suggestion that one of the worst members of society is the land shark who spends his time studying

the register of deeds in order that he may stir up strife, or take advantage of some unprotected owner."

About the time that Lincoln made this statement, Richard Torrens was beginning to put into practice the principle now embodied in laws in many parts of the world to avoid not only the dishonest land sharks, but also the honest mistakes and unnecessary work and expense which result from the old system of land title registration. Under the newer systems, the state or county government in registering a title or a transfer, automatically quiets the title and guarantees it, making an abstract, and any search of the records or legal advice as to the validity of the title entirely unnecessary.

An indemnity fund obtained by charging two and a half cents on each transfer has, in at least one case, been found sufficient to pay the claims of those whose lands were unjustly taken from them by this system; for even the state sometimes makes mistakes, and when it gives warranty deeds, or anything equivalent to them, may wish to provide some method of paying just claims which it has overlooked. The so-called indefeasibility of title is not absolutely necessary and we may have the Torrens System, or something that will give us many of its benefits without indefeasibility, according to the supreme court of one of our states, which says, "In our view of the case, the indemnity fund feature of the law need not be considered. The law can, we think, stand and accomplish its purpose without it."

The Torrens System is no longer a foreigner in the United States. It

has been domesticated and tested in whole, or in part, in eleven states. As first adopted in some of them, the law proved unconstitutional and was revised, but is at present apparently on a firm foundation in Massachusetts, where it was adopted in 1898 and amended four times. In this state, the law has been very successful. Some of the other states which have passed similar legislation are Illinois, Ohio, Oregon, Washington, Minnesota, New York, North Carolina, Mississippi, Colorado, and California. The plan was adopted in the Philippine Islands in 1902 and in Hawaii in 1903.

In many cases, the system is made optional, but in other cases registration under it is required in court proceedings. In adapting this system to conditions in the United States, there have been many repeals and amendments, but no country or state has ever abolished the system when it was once adopted. It has often been adopted in imperfect form and improved later, but has never been discontinued. Our Canadian cousins seem to be getting along well with the Torrens System as it was introduced in Vancouver in 1861, in British Columbia 1870-71, in Ontario and Manitoba in 1885 and in Alberta and Saskatchewan in 1906.

## EXCURSION RATES TO LOGAN VIA SALT LAKE ROUTE.

Account Annual Farm and Home Conventions at Logan, Utah, the Salt Lake Route will sell excursion tickets from all Utah stations January 22-23-24-28-29 and 30th. Tickets will be good returning until February 7th.

# Six Percent Money to Loan On Long Time

## A Small Annual Payment Will Take Care of Your Loan With No Worry of Foreclosure

### THIS IS HOW WE GET OUR 6% MONEY.

Each share of stock is sold for \$100.00. Of this amount \$50 is placed in the Surplus, or Working Fund, and \$50 in the Capital Stock, or Guarantee Fund.

The Surplus is loaned to the members at 6 per cent interest per annum on first mortgages.

These mortgages are not sold, but they are placed in trust and bonds equal to their face value, bearing 5 per cent interest and secured by them, are issued and sold.

The money received from the sale of the bonds is then loaned at 6 per cent interest on first mortgages, which are also placed in trust, and bonds of equal value, bearing 5 per cent interest, are issued and sold.

This process is repeated until the Association has outstanding bonds equal to fifteen times the amount of its Capital and Surplus.

In addition to having the bonds secured by an equal amount in mortgages, the Guarantee Fund is pledged as further security for the bonds of the Association.

The bonds of the Association, thus secured, will be one of the highest class bonds issued in the United States, and will enable the Association to secure money for its members at the lowest possible rate.

### ONLY \$73 A \$1000

a year will pay a loan from us, both interest and principal in 35 years, without commissions, renewal charges, or other expense, and you may pay off your entire loan any time after five years.

Under the present conditions you are paying 9 per cent, or \$90 a year for interest alone, and at the end of the period for which it was loaned you still owe the principal of \$1000. Under our plan \$73 a year will pay off a loan from us of \$1000, both interest and principal at the end of the time.

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Established 1904

Entered as second-class matter in the postoffice at  
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New York Office 5th Ave. Bldg.  
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Utah Horticultural Society, Utah State Dairymen's Association, Utah State Bee Keepers' Association, Bear River Valley Farmers' Protective and Commercial Association, Agricultural College Extension Department and Utah State Fair Association, Utah-Idaho Millers' and Grain Dealers' Association, Utah Fruit Growers Association.

#### OUR GUARANTEE

We guarantee every subscriber against loss thru dishonesty or attempted swindle by any advertiser in this publication. We do not attempt, however, to adjust trifling differences between the subscribers and honest, responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within thirty days from date of the transaction, and the subscriber must have mentioned Utah Farmer when writing the advertiser.

Even a hog likes to be kept clean.

One thing that seems out of place is that so many farmers buy their early garden stuff, including tomato and cabbage plants. There should certainly be a little time on the busiest farm to plow a little spot for a garden, and the wife, as busy as the busiest man, will usually see to its being planted. As to the plants—why not see to it that boxes of loose, rich soil are filled in the late fall, put in the cellar, and then when March comes, they can be sown with the seed wanted. A little care will produce all you need, and have some left to sell to the neighbors, thereby adding to your pocket money. A word to the women is sufficient.

#### THE AGRICULTURAL COLLEGE ROUND-UPS.

The UTAH FARMER sincerely hopes that a great many of its readers will be able to attend the Farmers' Round-ups and Housekeepers' Conferences that are being given by the Utah Agricultural College. These meetings are growing in popularity every year until they are rapidly becoming one of the most powerful factors for good in the State. The one at Logan is now in session, and it bids fair to be the most successful gathering of the kind ever held in the State. If you cannot be present throughout the entire session, why not go for a few meetings? There is no doubt that you will feel repaid for your effort.

#### LOOK OVER YOUR MACHINERY.

Now is the time to look over your machinery and make repairs. Repairs, when needed, are needed very much as a rule. A farmer can not afford to wait in a busy season to send for repairs. It takes time to send for them and the nearest branch may be out at the time and possibly be necessary to send to the factory. Look over your machinery, replace the lost nuts, worn bolts, defective parts. Think of an expensive machine costing hundreds of dollars, laid up for a week or ten days waiting for some extra when it should be at work. If farmers would get the most out of their equipment they must know that every tool, implement and machine is in actual readiness before the day they wish to use it. During winter days is the time to make ready for the spring and summer work.

#### THE MAGNIFICENT EFFORT OF MONROE

When the little town of Monroe in Sevier County became ambitious to secure one of the two-weeks Round-ups of the Agricultural College, many said that it could never be made a success. In the first place, Monroe is off the railroad which makes it more difficult for outsiders to attend. Then the town is not very large. These two conditions were said to render success impossible. That these statement of doubt were not well founded, has been fully demonstrated now that the Round-up is over. From the first meeting to the last, the attendance was large and the interest keen; and the people of Monroe are certainly to be congratulated for their unity of purpose and the progressive spirit they have manifested. The individuals who attended the Round-up received much good and the town will be better because of having worked in such a united spirit.

#### SAFE FARMING

The outlining of a program of "safe farming" should have the serious consideration of every farmer. Very few farmers are making a success of following one particular line of agriculture. There must be a rotation of crops. A wise farmer does not try "to carry all his eggs in one basket." He has some live stock along with his grain and sugar beets and he produces enough hay to feed the stock.

One season may bring very good returns for a certain crop while the next year there is quite a change. A man may go into the hog business, equip his farm for taking care of a number of hogs and because the price goes down, like it did this winter, he goes out of the business, it does not pay to make changes like this.

There are so many reasons why a farmer should give some thought and careful study in planning his farm work. "Safe farming" is one that will provide for the lean year and the fat years. Produce as much as possible on your own farm those things you need for your own home and farm. A vegetable garden to help provide for the farm home. Some small fruit. Poultry for their eggs and meat. "Safe farming" will provide such a rotation of crops that will help maintain the fertility of the soil. Will enrich the soil each year by the use of fertilizer of some kind.

"Safe farming" will take into consideration the marketing of our crops and will plan to produce those things that can be marketed when local conditions are taken into consideration.

#### DR. WIDTSOE'S WEEKLY MESSAGE.

##### FAR FROM THE END.

The study of 39 farms in a Utah county revealed that the average farmer receives annually for his labor \$326.00. The 10 better paying of the 39 farms were compared separately, and it was shown that each of these best farmers received for his labor \$1,028.00, or a little more than three times as much as the average of the 39. These figures, secured by the farm management demonstrator of the Agricultural College, may be accepted as being very accurate.

For each \$100.00 worth of feed fed, \$188.20 were received on the average farm, and \$23 on the better paying farm. Each milk produced in milk on the average farm \$14.00, on the better paying farm, \$35.90. The crop receipts per crop acre on the average farm were \$5.80; on the better paying farm \$10.10.

There were other differences between the two classes of farms, but these illustrate the power of the farmer over the things with which he works. Better stock and greater skill in feeding gave an increased profit of 27 per cent for the feed fed; and 151 per cent greater profit per cow for the milk produced. Greater skill in cultivating lands, otherwise the same, gave an increased profit of 74 per cent per acre.

Such increased profits did not come by chance. The investment in land and equipment on the average farm was about \$7000.00; on the farm paying the farmer 3 times as much for his year's labor, only about \$1000.00 more. The intelligent use of modern knowledge led to proper methods of feeding; to the use of profitable cows, and the employment of profitable cultural methods. A more faithful study of modern agriculture; greater diligence in applying the best knowledge to farm operation; and a ceaseless attempt to improve his present conditions, would probably enable any of the 29 poorer farmers to do as well as any of the 10 better ones.

Moreover, the 10 better farmers are not doing all that may be done. They, too, by greater care, wisdom and intelligent use of existing knowledge may increase their incomes considerably. Meanwhile, the lesson that may be safely drawn from the results of the better paying farms is that the Utah farmer may receive a comfortable return for his labor, if he does his work correctly.

To use freely of the products of the farm for the feeding of the family; to earn 5 per cent on the investment in the farm, and to receive in addition \$1000.00 a year for one's labor, means reasonable comfort. Many farmers do much better. Nearly all farmers on fair sized farms might do as well. We are yet far from realizing the possibilities of Utah farms.

One thing to be thankful for is, that there is more attention paid each year to the care and comfort of horses. Blankets in winter, nets in summer, harness that fits without galling—these are some of the little things that are being attended to more carefully each season.



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and pliability to harnesses; gives them newness and preserves them from ravages of harmful substances.

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### HOG-RAISING HINTS.

(Continued from page 5)

the summer pasture crops such as alfalfa, crimson clover, rye, etc., make very economical and efficient supplements for hog feeding. In practically every farming district cheap and efficient forage and grain crops are available for hog production. These should be diligently studied by the farmer with the aid of the State and Federal forces, and used in the most profitable manner.

The self-feeder is greatly reducing the labor cost in hog production, and the principles governing its use should become a part of every hog grower's equipment. It is especially useful in feeding growing, fattening stock, which is the largest part of hog production on most farms.

Hogs require continually mineral supplements to their feed. These have been furnished by allowing them free access to the following mixture:

Charcoal.....	1 bushel
Hard wood ashes.....	1 bushel
Salt .....	8 pounds.
Air-slaked lime.....	8 pounds
Sulphur .....	4 pounds
Pulverized copperas.....	2 pounds

Mix thoroughly the lime, salt and sulphur, and then mix with the charcoal and ashes. Dissolve the copperas in 2 parts of hot water and sprinkle over the whole mass mixing it thoroughly. Keep some of this mixture in a box before the hogs at all times.

### Diseases and Parasites.

The prevention and cure of disease are always more readily accomplished where cleanliness and sunshine prevail. Probably the commonest and worst troubles of hogs are hog cholera, internal parasites and lice. The farmer should make a thorough study of the methods of preventing and treating these troubles.

If the hogs are already wormy, turpentine can be given in the slop each morning for three mornings at the rate of one teaspoonful for each 80 pounds of live weight. Turpentine, however, is not very efficacious, and is liable to injure the kidneys.

Santonin, which was formerly widely used as a remedy for worms in hogs, is practically unobtainable at the present time owing to foreign trade conditions. The following treatment has been found to be very effective in experiments by the U. S. Department: Withhold all feed and water for 24 hours, then give each pig a tablespoonful of castor oil to which has been added oil of American wormseed as follows:

Small pigs 2 to 3 months old, 35 drops.

Pigs weighing 50 to 100 pounds, 50 to 100 drops.

Larger pigs, 1 teaspoonful.

Each pig should be dosed separately if the best results are to be obtained. In case separate dosing is impracticable on account of lack of assistance or other circumstances, the pigs may be sorted out into lots of half a dozen each according to size. Thoroughly mix the castor oil and wormseed oil in proper quantities with a small quantity of milk or mash, and give it to the pigs, watching them carefully to see that none gets more than his share. Attempting to dose too many pigs at the same time in this manner will result unsatisfactorily, as some will get more and others less than they should. This treatment should be repeated in

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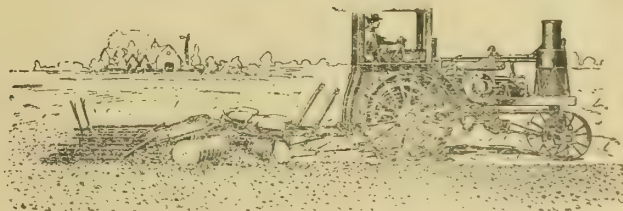
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20-35 H. P. Avery Tractor	\$1870.00
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BIGGER CROPS, LESS EXPENSE  
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Just 2 blocks West of the Temple.

a week or ten days to secure 100 per cent efficiency.

Crude oil makes an excellent dip for hogs. It can be mixed half and

half with water and sprinkled on with a sprinkling can. Kerosene oil emulsion is another excellent thing to rid the pigs of lice.



## THE HOME

### METHODS OF PREVENTING AND TREATING COLDS.

Miss Gertrude Tobiason.

From the beginning of time people have had colds, wherever you go, at most any time of the year, some one has a cold, some of course of a much more severe type than others. Some people are predisposed to them, or inherit the tendency. Others contract them easily, while again others get a slight cold and treat it indifferently and it hangs on. There are people who catch cold unconsciously and are very ill from the beginning. There are the people who catch cold in a draught and others from neglect. Colds are not taken seriously enough by some until pneumonia or some other complication sets in, then a doctor is sent for.

What can be done to prevent a great deal of sickness, suffering, and expense? Treatment really should start early in life to avoid these troubles. When in infancy the babe should not be too warmly dressed. The mistake is in over dressing. Then the minute a door is opened or the child is taken out, it cannot stand the sudden change, unless still more warmly dressed.

A babe should be dressed the same winter and summer for the house, and should have plenty of fresh air. Take the child from one room to the other, and when it is taken out in cool weather a heavier wrap can be put on it, and in the winter, warm outside clothing put on, but do not cover the face unless very windy or cold. The babe needs fresh air in the winter the same as in the warmer weather. By thus regulating the

wrapping of the babe according to the temperature of the surroundings, colds and coughs would be fewer. By keeping the resistance of the body up to par, colds cannot get a good in road. The fighting powers of the body can overcome the germs that enters and do away with it.

Everybody knows that colds are caused by germs. The body has several ways of combating these germs if it is in good condition, but the instant the resistance is lowered, then the germs get a hold and you have a cold.

To keep the body up to fighting condition everything that has a tendency to pull this condition down must be removed. Hence, the reason for good elimination. The different avenues of elimination, the bowels, should be kept open. If a laxative is needed, use it. The drug can not do as much harm as the poisons that are generated in the intestines and absorbed into the tissues of the body. The kidneys should be kept active by drinking plenty of water and keeping them flushed out well. The lungs should be kept in good condition by breathing good, pure, fresh air. Now cold air is not always fresh. Often it is thought that by opening a door of another room, that because the air is cold it is fresh, but it is nearly always stale air. Fresh air can be warmed and is usually not so irritating to the lungs in cold weather as the sharp cold air. The skin, the last but not least, should be kept clean. A frequent bath is necessary to keep the pores open, and poisons from all parts of the body, to a certain extent, are thrown off through the skin. Hence the great need of a good hot bath with soap at least two or three times a week. Of course a daily bath is better.

Another very important feature in keeping up resisting powers is the digesting of foods; also the assimilation. Proper foods are of great importance and though mastication or chewing is often neglected, because often a meal is swallowed in a very few minutes, the digestive organs cannot handle the food in such a condition as readily as though it were in liquid form on entering the stomach, and in turn the nutrition is not as good as it should be, hence the low resistance.

Exposure to great heat and cold is very harmful. After bathing in hot water leave the house or room until thoroughly cooled off. The best method is to take a cool or cold spray or throw some cool water over the body to cool it off. If cold water cannot be stood well so that the body becomes red and warm, or a good reaction takes place, take an alcohol rub and you will have practically the same result.

Now as soon as a cold begins to give evidence of its arrival, treatment should be started. Do not wait until you are in bed sick. The very first thing to do is to start elimination. Take a big laxative, (castor oil, calomel and salts, Cathartic pills, licorice powder, etc.) a good hot bath, to start perspiration, hot lemonade, flaxseed tea, or most anything hot to drink, and go to bed and before get-

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A GOOD REST AND VALUABLE INFORMATION FOR YOU AT THE

## Farmers' Round-up

AND

## Housekeepers' Conference

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Subjects Discussed for the Benefit of the Farmer:

The Broad Principles of Utah Agriculture.  
How to Increase Farm Profits.  
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If you could follow the making of this sugar from the inspection of the sugar beet seed to the final inspection of the finished product before being shipped, you'd know as we do, that there is no cleaner, no purer, no higher quality sugar produced in the world.

Buy a sack today and prove our statements.

**UTAH-IDAHO SUGAR**  
ABSOLUTELY PURE

The Utah-Idaho Sugar Company recommends attendance at the Annual Farm and Home Conventions to be held at Logan, Utah, January 24 to February 5; Cedar City, Utah, February 9 to 19.

ting up take an alcohol rub. Go on a fast for two or three days, with extra water drinking.

Usually this simple treatment will knock a cold if taken in the beginning. Often times tonsillitis comes with a cold and then more than ever care should be taken in the start, because tonsillitis causes rheumatism and then this usually results in heart trouble, so be strenuous in your treatment of tonsillitis. Heavy laxatives, hot and cold applications to the throat, hot foot baths, hot and cold water

drinking are very good remedies. Aspirin is especially good. Five grains every two hours until the inflammation begins to subside will prevent any rheumatic trouble that might be coming on.

Aspirin is not as harmful as most people think. Two hundred and fifty grains have been given in five grain doses and no ill effects found. In a great many cases bad tonsils and adenoids are the causes of frequent colds. These should be removed at once by a good reliable specialist who



takes them out, and not only cuts them off. By spraying the nose and throat with Dobells Solution, the cold in the head will not only be gotten rid of, but will also be prevented. Spray night and morning during health as well as illness.

For sore throats and hoarseness the inhaling of hot steam is excellent. By putting a medication into the water and letting it boil will often hasten the good results. One teaspoonful of tincture of benzoin in one quart of water and breathe in the steam as hot as possible is very good. After all hot treatment to the head or face, cold should be used to contract the blood vessels and put them in good condition. A towel wrung out of cold water and applied is very good.

## Pattern Department

Full directions for making as the quantity of material required, accompany each Pattern. Price of each Pattern, 10c; no extra charge for postage. When ordering, all you have to do is to let us know your name and address, the number and size of each Pattern you want, enclose 10c for each pattern, and address all your orders to: PATTERN DEPARTMENT, THE UTAH FARMER I. EHL, UTAH.



7536—Ladies' Waist. Cut in sizes 34 to 42 inches bust measure. Any of the pretty flowered materials can be used to make this waist.

7542—Ladies' Skirt. Cut in sizes 22 to 30 inches waist measure. This skirt is cut in two gores and is perfectly plain.

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7577—Ladies' Apron. Cut in sizes 34 to 44 inches bust measure. Linen, gingham or calico can be used to make this apron.

Price of any of the above patterns 10 cents each.

Some people take quinine. This is rather good, three to five grains two or three times a day is sufficient. After taking this amount the patient will usually detect ringing in the ears and then it is time to stop.

Everybody who is suffering from colds should remain in bed from twelve to twenty-four hours, and if that is impossible, then stay in the house, because the changing from one distinct atmosphere to another only aggravates the condition. From a hot house out into freezing weather, is enough to give anyone a terrible cold unless he prepares himself for it. Drug treatment of a cold is not so very reliable unless started early in the case. In some cases drugs act only as a help and it is the rational treatments that really give the permanent relief.

### CURE BEEF AT HOME

P. F. Trowbridge, Missouri Agricultural College.

One of the important means of solving the high cost of living on the farm, is being neglected if each farmer does not produce and cure most of the meat for his own household.

Any of the brine or dry mixtures which give good results in curing pork can be used satisfactorily for beef, but as beef is leaner than pork, it should not be allowed to remain in the brine or mixture quite as long, or it will become hard and salty.

Dried beef should have the same cure as corned beef, care being taken not to let it get too salty. It should then be washed to remove the excess of the cure, and smoked if you like the smoke flavor. A very good country practice is to dry cure the beef with salt and brown sugar, using about a fifth as much sugar as salt, rubbing the meat very thoroughly with the cure every two or three days for about two weeks. It should then be washed, wiped, and hung up to dry in a warm place if you do not wish to smoke it, or transferred to the smoke house and given a light smoke.

Corned beef is at its very best when it has been in the cure about ten days. If kept in the cure more than a month, it needs considerable freshening before cooking. If you wish to preserve the red color of the beef, you should use a small amount of saltpeter, not more than two ounces to each hundred pounds of the meat. This improves the color of the meat but is detrimental in that it tends to harden the lean fibers.

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Salt Lake City, Utah.

### WHICH PATH?

There were a million yesterdays  
That have rolled through the misty  
past.

There were a million different ways  
To put them to use while they last.

But yesterday's chances are gone;  
It's hopeless to plead their return.  
Their substance is lighter than song:

There'll be a million tomorrows  
In the misty haze of the dawn;  
And a million ways to borrow  
With them as security's pawn

But you can't till tomorrow's fields  
Nor harvest a next year's crop.  
There's nothing in promise's yields  
To lead to success at the top.

You can't save from tomorrow's wage  
Nor build your home next year.

Promises lead to dry old age  
And a heart that is cold and sear.

Intentions are thinner than air  
And they lead down the smoothest  
path;

But success on this road is rare  
And sorrow is the aftermath.

—O. E. S.



## Organization For The Economic Operating of a 320-Acre Dry-Farm---160 Acres Cropped to Wheat Each Year

So many people have expressed an interest in the recent article by J. W. Paxman on "Organization and Planning for Operating a Dry-Farm" and have asked that we reproduce the following taken from the article.

### Equipment.

Value of land, all in state of cultivation, 320 acre @ \$25.....	\$8,000
4 Horses 1200 lbs. to 1400 lbs.....	\$600
2 Work Harnesses for wagon.....	58
2 Work Harnesses for plow.....	37
1 Farm Wagon, 3 1/4 inch.....	120
1 Gang Plow.....	75
1 16 ft. Home-made Harrow.....	45
1 16 ft. Home-made Weeder.....	50
1 20 ft. Light Harrow.....	25
1-3 Interest in 12 ft. Header.....	85
1 Header Box.....	35
1 16 Drop Drill.....	140

Total cost of equipment..... 1,270

Total Investment .....\$9,270

### Program of Work

- Sept. 1 to Sept. 30, Harrowing and Drilling 160 acres (20 days at rate of 8 acres per day).  
 Oct. 1 to Oct. 15, Plowing 100 acres stubble (30 days at rate of 3 1-3 acres per day).  
 Nov. 15 to March 15, 4 1/2 months off the farm to earn feed for the teams, making improvements, repairing, etc.  
 April 1 to April 15, Harrowing 100 acres fallow (10 days at 10 acres per day).  
 April 15 to April 25, Harrowing 160 acres grain (8 days at 20 acres per day).  
 April 25 to May 25, Plowing and Harrowing 60 acres stubble (20 days at rate of 3 acres per day).  
 May 25 to June 30, Cultivating (or plowing) and harrowing 100 acres fallow, (25 days at rate of 4 acres per day).  
 July 1 to July 5 Harrowing 60 acres fallow (3 days at rate of 20 acres day).  
 July 5 to July 15, Recruiting forces, repairing, and preparing for harvest).  
 July 15 to August 15, Heading 400 acres for self and co-partners (20 days at rate of 20 acres per day).  
 August 15 to September 1, Threshing and storing or marketing crop.

### Returns and Cash Expenses.

Normal crop, 160 acres, 20 bushel to acre, 3200 bushel @ 75c.....	\$2,400
Help in heading 160 acres.....	\$ 96
Threshing @ 7c per bushel.....	224
Seed, 160 bushel @ 75c.....	120
Repairs and incidentals.....	100
Taxes (estimated).....	75

CASH EXPENSES ..... 615

Net Farm Income ..... 1,785  
 Five per cent on investment ..... 461

Labor Income, Man and Teams.....\$1,321  
 Or \$176 per month for man and teams for 7 1/2 months.

### A GOOD BUY FOR ONE DOLLAR

Can you think of something that will be more helpful to you than a weekly visit of the Utah Farmer. Brimful of good sound advice, helpful suggestions on every phase of farming and farm life. Our 800 pages of good reading for one dollar. Comes 52 times during the year. Renew your subscription today.

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**SEEDSMEN** Est. 1865  
**SALT LAKE CITY, UTAH**

## Questions and Answers

Utah Farmer: Berger, Idaho.

Judging from present appearances there will be shortage of water on this, the Salmon River project, now I should be pleased if you would advise me what to plant, that is, what kind of drouth resistant plants to plant for feed for hogs, chickens, etc., as also grains? Our rain fall is 12 inches.

Yours again,

H. C. E.

Answered by F. S. Harris.

The cereals—wheat, barley, and rye—are among the most drouth resistance crops and they also make good feed for the animals you mention.

As a forage, Sudan Grass is very promising and if you get a stand, alfalfa would doubtless be a good crop for you. Local conditions will largely determine what crops you should grow.

Minersville.

Utah Farmer:

Gentlemen:—Will you kindly answer the following questions. In 1914 we broke up some new land, sandy loam, covered with white sage, black sage and this white cirley or buffalow grass. Planted it to oats, wheat and alfalfa, got about 15 bushels per acre of good grain, alfalfa did well but the ground requires a great deal of water. Also some corn but the corn did not do much on account of being planted late. 1915 we planted wheat, oats and more alfalfa with oats. Did

not do very well only where we had the corn. Wheat did fine compared with the others. Potatoes did fine but the ground was manured, but it is too far to haul manure so we do not know just what to do or plant this year. All crops planted in the spring.

Our crop for 1915 was almost failure 8 to 10 bushels per acre. We were very much disappointed last year we thought the land would be good for at least 2 years but it seems not.

If you can give us any information as to what kind of a crop to plant this year we will be more than pleased. Do you think barley would do anything on that kind of land? This land has plenty of fall but not to steep for water. Does not wash unless a larger stream in furrow.

Thanking you for the information desired

I am your respectfully,  
 R. W. Dotson.

Answered by F. S. Harris.

It is impossible for me to tell you what crops would pay best, since there are so many local conditions with which I am not familiar. On the newer land I should think one of the small grains—wheat or barley would do best. After the land is in a good state of cultivation, you might do well to plant alfalfa. When this has been in a number of years, it could well be followed by corn or potatoes. Local markets and the nature of your soil must determine largely what to grow.



## GET TOGETHER AND PUT UP SOME ICE

There are many advantages to come from a numbers of farmers joining together, in a co-operative way, in putting up ice for home consumption.

The cost of building in which to put the ice is very small as compared to the advantages one can receive

during the summer months from pure ice.

Several things are involved in keeping ice. There should be good under-drainage to carry the water off as the ice melts, for water is a conductor of heat. Water melts ice much faster than does air. Provide a perfect ventilation. This is required above the ice to keep the covering of the insulating material as dry as possible, for if wet the covering is a conductor of heat. Pack the ice well in order to prevent the circulation of air between the ice cakes. Be very careful as to the packing of the sides and bottom.

A building can be of stone, brick, concrete, or wood. Concrete is good for the foundation, and should extend below the frost line, and about 18 inches above the ground level so that the cells will always be dry. The soil underneath must be well drained, preferably with tiling or a ditch filled with rocks. A layer of straw should come next, although sawdust is often used.

### Double Walls Desirable

"The walls may be either single or double. Single walls of matched boards covered with paper on the outside are good. Double walls are much better, however, on account of the better insulation.

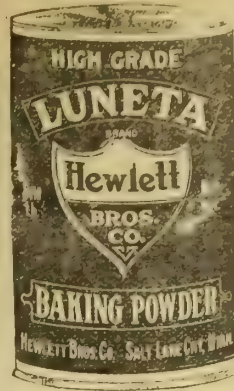
"In building the double-walled house the paper is put on the two by four uprights with boards on both sides. This leaves a four inch dead air space and if this air space is partitioned every three or four feet with a strip of tarred paper the insulation will be even better because there will be no up and down circulation. Sawdust is often used for filling this air space.

"The roof may be almost anything that will turn water, keep off the sun, and provide ventilation. To insure the last, small doors near the top at both ends will suffice for the small ice house. If these doors are left open occasionally on dry days, the resulting air currents will aid in the removal of the warm, moisture-laden air."

Place the first layer on edge and the others in a horizontal position. Every third layer—regardless of how packed—should be placed so that the divisions will not coincide with those in adjacent layers. Pack the ice to within eight or 10 inches of the walls. Space left should be filled with sawdust, if obtainable, although straw will do. Each cake should be left about an inch from its neighbor on either side and a top layer, eight to 12 inches deep, of sawdust or straw should be placed over the top.

The ice house described is almost entirely above ground but there is another type partly above and partly below ground and still another that is almost entirely below ground. As a rule, the first type can be more easily and economically built. A ton of ice occupies approximately from 35 to 40 cubic feet, and four or five tons is usually all a single family will use in a season. Where the cost of ice is small, a cheaper shed can be used with a relatively high loss of ice from melting. If, on the other hand, the cost of ice is high, it is better to build a more expensive shed, for the loss from melting will thus be lessened.

Go over cabbage and root crops stored in the cellar and throw out decayed material. This will prevent further decay and help keep the cellar clean.



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Avery Tractor success is due to these special features in their construction: Sliding Frames, Double Drives, 2-Speed Gears, Low-Speed Heavy-Duty Tractor Motors, Extra Large Crank-Shafts, Renewable Inner Cylinder Walls, no Pumps or Fan, Freezer, 3-Plow Tractor, \$760 cash; 4-Plow Tractor, \$1120 cash, 5-Plow, \$1630; 6-Plow, \$2145; 8-10-Plow, \$2475. Avery "Self-Lift" Plows and "Yellow-Fellow" Threshers are also built in sizes to fit any of the above size tractors. We also build a special smaller size tractor for \$395 cash.

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We, like other seed houses, have had considerable trouble to find suitable seed potatoes, stock we could recommend free from disease and which would be of special merit as to reproducing itself and we made up our minds to offer our customers stock that was free from disease, true to type, color and size, or quit handling seed potatoes.

The Government has established a station for the production of pure, clean and suitable seed potatoes at Jerome, Idaho. A visit to the station convinced us that they had some clean stock which we wanted and we bought what they could spare, planted them on new sage-brush ground, watering them once, dried them up the latter part of July and harvested them the middle of October and got a yield of 40 bags per acre, none larger than hen eggs. Now we have a stock as firm as rocks, perfect in type and absolutely free from disease. We planted 45 acres of this seed stock on old alfalfa ground and produced 260 bags per acre. We also selected three varieties and sent them to the National Potato Show at Michigan and were awarded the first prize on each.

If you want potatoes of special merit, potatoes that will make you money, write us.

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## PORTER-WALTON COMPANY

SALT LAKE CITY, UTAH.

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MONTANA

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Read the following which was printed in the Anaconda Standard, December 11, 1915. It is the Ranch we are now subdividing and selling.

### Montana Oats Sell at High Record Price

One of the largest sales of oats ever made in Montana was announced yesterday when the Beaverhead Ranch company of Dillon, one of the Penwell companies, sold to the Gould Grain company of Minneapolis 3,000,000 pounds of oats at \$1.15 per hundred. The total consideration was \$34,500.

These 1,500 tons of oats loaded in 50 cars will make two train-loads and will be sent East as fast as they can be loaded.

This is one more evidence of the fast-increasing prominence of Montana as a grain-producing state and the price received shows what enormous profits the farmers of Montana are making this year.

Get busy and see this property! Here is the country where you can make some money.

### Sold On Long Terms, Easy Payments

Railroad station, school house, telephone line on property. Butte city affords highest priced market in the West.

Unquestionably the best opportunity for home-seekers now being offered.

For photographs and full information see

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## POULTRY

### CAN AN EGG STRAIN BE MADE TO WIN IN THE SHOW ROOM.

By Edwin Brickert.

I know of no question that is of more mutual interest than this one. And I dare say there are as many ideas on the subject as there are colors in the rain bow and I am not going to attempt to answer the question, mainly by a "yes," or a "no," but will give a few points on each side of the question. All I am able to do is to quote my ideas, together with experiments tried by myself and others.

In the breeding of poultry we can usually divide our breeders into two classes. The breeder of exhibition stock and the commercial breeder.

If it would be possible to join these two together I believe it would be the best happening that could exist in the poultry world. When this comes to perfection it will enable the commercial breeder to get some of the joys and profits of the show room as well as enabling the exhibitor to get some eggs from those "show" hens.

I will discuss the subject from both the negative and affirmative points of view, and will begin with the later.

First I will give a few of the accomplishments of a very enterprising breeder of Michigan who has made his show hens lay. Also his great laying record breakers are real show birds.

It may be a little hard to believe, but only six years ago, \$14.50 was the total amount expended by this breeder for his foundation of the great strain he now has. And in these six years he has proven that an egg strain can be produced, embodying standard requirements, for his birds, bred from his high record hens, have not only won firsts, together with color and shape specials, in such shows as Chicago, Indianapolis, Los Angeles, Grand Rapids and Toledo, but were last year among the leaders in both the Mountain Grove (Mo.) and the Storrs (Conn.) egg laying contests.

When this man began these experiments the way was new. But few were willing to believe since breeding of value. Now many state experiment stations are proving this experience, and many more breeders and beginners these days are buying stock more on trapnest record than on show records.

Although as stated above, our breeder invested only \$14.50 which was all he had in the world at that time, due to a series of misfortunes and family

sickness, nevertheless, he secured the best blood an old live breeder had been able to produce after seven years trapnesting, bringing four hens with records of from 219 to 267 eggs a year, from a flock of 700, and a cockeral bred from a 250 record hen. Thus you will notice that this strain has about 14 years egg breeding. Today he has a flock of several hundred birds, which together with his buildings are worth several thousand dollars.

In the winter of 1913 this enterprising breeder entered a pen of his Buff Leghorns at Mountain Grove and Storrs, and at the former contest under official supervision he proved his claim of the "greatest laying strain of all Leghorns," by his pen of buffs outlaying all American bred Leghorns for the four winter months, one of his hens but four eggs lower than the highest record individual among 1030. This hen crossed the 200 mark at the beginning of her eleventh month, having in the meantime completed her molt without discontinuing her laying.

He also had two other hens at Storrs who crossed the 200 mark in eight and one half and nine and one half months, respectively, after losing best hen in the seventh month, who at that time was in sixth place, among the whole 840 hens of all breeds in the contest. He had others in this pen that crossed the 200 mark and these facts are especially gratifying, since this pen was late hatched pullets and but four in the pen had started to lay when the contest was in its third month.

There is another fact that the buying public ought to appreciate knowing, and that is that the birds in the above mentioned contests, do not represent one hens breeding, but are composed of females from every breeding pen the owner uses, making his winter laying record at Missouri representative of the breeding in his whole flock. Here is food for thought for commercial farmers, who use White Leghorns exclusively, in this breeders winter laying S. C. Buff Leghorns.

Mr. T. E. Quisenberry of the Missouri experiment station, director of this Mountain Grove contest, says in his published report, "It does not mean that you have to entirely disregard shape and color to breed a good laying strain of any variety. One of our contestants in the Buff Leghorn class from Michigan entered his birds in one of the largest poultry shows two weeks before our contest began. We now find that some of his highest scoring pullets, which won the highest honors in the show room, are those which have made the highest records in the contest by laying the greatest number of eggs. His pen is fine in color and shape as well as breeding when it comes to the egg basket."

In the case of the Michigan breeder, I have illustrated what I thought to be the strongest story in favor of our question. Now I will endeavor to give a few points on the negative side.

At the great poultry show of the P. P. I. E. at San Francisco this last

(Continued on page 15)

## The Perfection of Union Pacific System Service



Is not a chance—it is the result of the expenditure of millions of dollars in money and the working-out of a positive plan of betterments, which has extended over a period of many years—

As a consequence, the Union Pacific System has been brought to a state of operating regularity—the effects of which are felt through every channel of the service; the work goes on from day to day, and the public is assured of the full benefits resulting therefrom—

When you buy transportation, you buy it with the same economic conservatism you would use in purchasing government bonds or other dependable securities—

In traveling, you are entitled to stability—service, and protection, for every dollar you expend—

The Union Pacific System has been termed, "The Standard Road of the West;" it is "standard" in everything the world implies.

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## A Great Magazine Offer

We have made arrangement with the publishers of Pictorial Review and can for a limited time make our readers an exceptional offer. With Pictorial Review you actually get four \$1.50 novels worth \$6.00 they will appear during 1916. One of them starts in the February number. "The Heart of Rachel" by Kathleen Morris. Serial stories are only one of the many good things that will appear in Pictorial Review. It is a high class, high priced magazine and we are very pleased to be able to offer our readers this combination. The time is limited and you must act quick if you want to take advantage of it. The price of the Pictorial Review is \$1.50 for one year, twelve big magazines. Utah Farmer for one year \$1.00 comes to you weekly. We make the exceptional low price of \$1.50 for both of these papers for one year. This offer is good to new or old subscribers. Old subscribers must pay up-to-date and one year in advance. Order today. Get the Pictorial Review and Utah Farmer both for one year for \$1.50 send your orders to Utah Farmer, Lehi Utah.

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"Last season I installed a Queen as an experiment. It hatched 18 per cent better than eastern made machines and 11 per cent better than any other machine made in the west. All machines were run under exactly the same conditions. I recommend the Queen to everybody inquiring which is the best, and especially to beginners."

—John Bowen, Littleton, Colo., Colorado Poultry Fanciers Association.

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**For the Buyer**

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## THE GEM HERD.

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The Home of the Western Prize Herd. My winnings at Idaho State Fair 1913, were 13 first, 3 seconds, champion boar and sow, and champion fat barrow. At a Tri-County fair held at Jerome, Ida., I took all but one second. I have anything wanted in Chesters from a weaning pig to a champion boar or sow at prices all can afford. High class stock. Write me.

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White Leghorns, Brown Leghorns, Barred Rocks, R. I. Reds, Black Minorcas, Anconas, Buff and White Orphingtons. Prices on application.

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860 acres improved ranch, independent water right, 1 mile from town and railroad, 125 cattle, lot horses hogs, implements, wagons and crop go with place. Cheap at \$35,000. Terms, or would take city property at cash value.

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Was. 2989. 707 Walker Bank Bldg.

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On improved farms with primary water rights, at reasonable rates."

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Agents \$50 weekly. Sell our 15 house hold inventions. New, live quick sellers. General agents getting rich. Every home buys one or more. Samples furnished active workers. Write now, Oregon Sales Co., Box 1158, Portland Oregon.

**WANTED** to hear from owner of good farm for sale. Send description and cash price. R. G. List, Minneapolis, Minn.

## FOR SALE CHEAP

Some Jubilee Incubators as good as new, holding 500 eggs. Also two successful machines holding 320 eggs each.

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Cherry Creek Dairy Farm offers Registered Cows, Bulls and Heifers. Sons and daughters of Rag Apple Korndyke 13th. Grand champion Utah State Fair 1915. Sire Rag Apple Korndyke. Dam, Fairview Mabel Korndyke A. R. O. record 25.51 pounds butter in seven days fat 4.83 per cent as a Jr. three years old. We offer 10 choice heifers age 2 months to one year for \$1000.00. A bargain for some one. Bulls from \$75.00 to \$150.00. Including a choice Bull calf 5 months old from Lady Netherland, 1st prize. Also 1st in milk and butter fat contest Cache County and Utah State Fair.

**NELSON BROS. Props.**

Richmond Utah

## FLOWER GARDENS AND FORESTS UNDER THE SEA.

May be seen from the glass bottom boat in the harbor of Avalon, Santa Catalina Island. One of the interesting personally conducted side trips in connection with the Salt Lake Route big Mid-Winter Excursion on January 29th, \$35.00 to Los Angeles and return, on that date only. Special trains with standard and Tourist sleeping cars, Dining and Observation cars start from Salt Lake City. Make your reservations early. Further particulars concerning side trips, routes, etc., may be had from any Salt Lake Route

Agent or by addressing, J. H. Manderfield A. G. P. A. 10 E. 3rd South St., Salt Lake City, Utah, adv.

## CAN AN EGG STRAIN BE MADE TO WIN IN THE SHOW ROOM.

(Continued from page 14)

year, the class of S. C. White Leghorns was one of the largest and best in quality and nearly every prize in this class was won by one exhibitor, although the exhibitors were many I had a long talk with this successful exhibitor and some of his sayings went like this. "We intend to sell eggs next year from twelve mated pens. They will range in price from \$5.00 to \$25.00 per 15. The \$25.00 pen will contain our winners here and at the other large shows. All of these twelve pens are to contain either prize winners or their direct descendants, and these pens are to be graded as to their ability to win." "But," I asked, "What about the laying or producing qualities of these hens. How much better layers are the hens in the \$25.00 pen than those in the \$5.00 pens."

Again he went on to say: "No hen can come into any of our twelve pens that does not have a record of at least 160 eggs in her pullet year. This is all the attention we pay to egg records. She has to lay at least 160 eggs to be admitted to these pens and from then on they are classified from a standpoint of color and shape. In other words you will be just as apt to get as good layer from my \$5.00 eggs as my \$25.00 ones."

This man is not trying as hard as he should be to combine the two qualities.

Nearly every Fancier or exhibitor, besides pricing to you his good stock will offer a so called utility bird, which means only a mongrel of eggs are all you want. On the other hand nearly every first class trapnest egg record keeper will price you some exhibition stock, and this goes to show that these men think the two qualities can not be successfully and profitably combined.

It is true that when a hen is fed and cared for, for exhibition that she can not lay. Neither can you conduct an egg test when she is on the show circuit; then on the other hand when a hen is fed and cared for for the maximum egg yield, she is in no condition to show.



## THE GRADING OF EGGS.

By J. O. Lofgren.

In your last number of the Utah Farmer there appeared a valuable article on "Production of Guaranteed Eggs" by Dr. R. H. Williams. Evidently the writer knew what he was talking about and the article is well worth the price of a years subscription to your paper if poultry raisers will follow the simple rules there given.

The quality and freshness of eggs differs as greatly as any article offered for sale.

For convenience let us consider the kinds offered for sale by our farmers and merchants and see if any improvement can be made.

Extras are large, clean, infertile eggs, produced from one breed of uniform color and produced from wholesome feed.

Firsts, are just as good in quality but of different colors.

Seconds, are good quality but smaller or dirty.

Thirds, may be less than a week old but since they are fertile that is, the rooster has been allowed to run with the hens) and the heat of the laying hens on the nest or the broody hens, or the warm weather, perhaps the warm kitchen has developed the germ till it is repulsive to eat after a day or perhaps two days of development.

The effect of heat on the egg is most dangerous and least understood. Owing to this fact the Utah farmers loose over \$1000.00 per day during the warm months especially, and at a very low estimate. Of all things that you do, avoid allowing roosters to run with the hens, only for hatching purposes. Remember that heat will hatch an egg in 19 to 21 days and that the chick may be one tenth grown in two days. You may not know that this growth goes on slowly at 68 degrees and from 90 to 103 degrees the egg spoils rapidly.

Drive this home to your readers as there is nothing that needs the careful consideration of every chicken raiser and even our poultrymen do not realize its importance. Think it over. Let us continue.

Fourth, are eggs held by the farmer or by the careless, ignorant or dishonest producer or dealer who sells them too often as fresh or as strictly fresh.

The age of an egg can easily be determined almost to the day by the expert candler and every producer should learn to candle his own eggs and there would be less deception to the ruination of the market. During the spring season there are many bloody eggs, so laid, which need culling out, this will happen about one egg per thousand sometimes one egg in a hundred as today I found four in one case. This was no fault of the producer but it would have ruined my trade to that extent if I had sold them to particular trade.

Fifth grade, let us consider as the eggs effected further by heat till we have blood rings and even to the ready to hatch stage. Then there is the blood rot, the black rot, the spots and others. Did you know that an egg which has been in the field on a warm July day for 48 hours is by far worse than one properly stored in cold storage for eight months.

We used to put our eggs in a cellar for four weeks or more and argue

that if an egg is good to eat after being in cold storage six months surely six weeks will not hurt us much.

We may as well say that if peaches or straw berries are good after being bottled ten months surely they will not spoil in a few weeks. Do not misunderstand me to say that all who sell bad eggs are dishonest, indeed not, as there are few and far between who do not sell bad hens eggs almost every day in the year and especially during the warm weather and broody season, and who would swear on a stack of bibles that every egg is fresh because less than a week old, and they fully believe what they are saying to be true.

As the ten commandments were a guide to the children of Israel so the following is essential to success of any poultryman.

Study them and put into practice:

1. Keep the nests clean; provide one nest for every four hens.
2. Gather the eggs twice daily.
3. Keep the eggs in a cool, dry room or cellar.
4. Market the eggs at least twice a week.
5. Sell, kill, or confine all male birds as soon as the hatching season is over.

And let us add the suggestions from Bulletin No. 18, issued by the State Dairy and Food Bureau of Utah:

Do not wash eggs. Use the dirty and small eggs at home.

Don't sell eggs which have been in an incubator.

Don't sell eggs which were found in a stolen nest.

Keep the eggs out of the sun when taking them to town.

Don't keep eggs near oil, onions, etc., as they readily absorb odors.

## "SAFETY FIRST"

I'm more powerful than the combined armies of the world.

I have destroyed more men than all the wars of the world.

I'm more deadly than bullets, and I have wrecked more homes than the mightiest of siege guns.

I steal, in the United States alone, over \$300,000,000 each year.

I spare no one, and I find my victims among the rich and poor alike; the young and old; the strong and weak; widows and orphans know me. I loom up to such proportion that I cast my shadow over every field of labor from the turning of the grindstone to the moving of every railroad train.

I massacre thousands of wage earners in a year.

I lurk in unseen places, and do most of my work silent. You are warned against me, but you heed not.

I am relentless. I am everywhere; in the home, on the streets in the factory, at railroad crossings, and on the sea.

I bring sickness, degradation and death, and yet few seek to avoid me.

I destroy, crush, maim, take all and give nothing.

I am your worst enemy.

I AM CARELESSNESS.

—Ex.

Any kind of stock likes variety of feed. This does not mean that they must have the latest computed balanced ration but make a study of the animal's likes and you will find that a variety can be obtained from the feed-stuffs on hand.

# ONE MORE CHANCE

TO GET A

# JERSEY BULL

## At a Greatly Reduced Price

During the sale we have been conducting we have disposed of part of the Jerseys Bulls.

The time is getting short and we must plan to move. What are you going to do about buying one? Remember you can not buy these animals at the reduced prices if we have to provide a new place for them. We explained in previous advertisements why we are making these reduced prices and you must act quick if you expect to save money on a high class Jersey Bull.

You know the value of a good sire, but you do not know what a bargain we can offer you unless you give us a chance to tell you about them.

There is real merit in these fine animals and you should buy one now.

If you can not buy one join with your neighbors and secure a good sire for your community.

**THE IMPORTANT THING ABOUT THIS IS THAT YOU MUST ACT QUICKLY. IF YOU WANT FIRST CHOICE WRITE, PHONE OR TELEGRAPH TODAY.**

**HUGH J. CANNON**

Templeton Building

Salt Lake City, Utah

PHONE HYLAND 558.

PHONE WAS. 1805.

**CANNON BROTHERS**



UT

# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region

OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE

VOLUME XII; No. 27

LEHI AND SALT LAKE CITY, UTAH

February 5, 1916



**THE DEVIL'S GATEWAY**  
One of our Beautiful Rugged Mountain Scenes.



# He Guesses Best Who Guesses Least

Did you ever go to a circus and watch the man near the side shows with his little game of guessing—guessing “under which hand is the little ball.” Well! it is some game for the fellow who is running it. Many the one who gets stung that does the guessing.

Many of our farmers do a lot of guessing but seldom with the “sure thing” man. They take all kind of chances in their work, many times not knowing the chances they are taking. Many of us do a lot of guessing about our farm work and we really do not need to always do it.

Many changes have taken place in the last few years so that we do not need to guess like we did in former years. The Government is spending thousands of dollars in research and experiments to prevent the losses and to make farming profitable. The Agricultural Colleges and Experiment Stations have done a great work and all to help the farmer so he does not have to do a lot of guessing. And another important thing that so many overlook is the work of successful farmers in every community.

Now there is another way that will help every farmer to over come guessing and that is to read the Utah Farmer and other first class farm papers. The Utah Farmer is spending a great deal of time and money to secure for its readers the very best and most reliable information obtainable. Whether it comes from the Government, Experiment Station, Agricultural College or successful farmers we are gathering all of this so that you will not need to guess. Why don't you profit by the experiences of others. Don't go along guessing but read what others are doing.

The Utah Farmer is very careful in presenting anything to our readers but what we know is alright. Some of the best experts, those acquainted with local conditions go over the copy so that we know it is O. K. This is all done to help you so that you will not be taking any chances or guessing. In a good farm paper like the Utah Farmer all of the different agricultural forces are combined for the help of its readers.

You are already a subscriber to our paper and if you have not renewed will do so in a short time, now we want you to help us increase our number of readers. Say a kind word to your neighbors, tell them of the many good suggestions you find in its pages each week. We want your support in getting the 5000 new subscribers. During this month we put on a large number but not quite so many as we would like to have done.

The farmer who reads a good farm paper should do the least guessing of any one. We want your good will and support in this work we are doing. Send your renewal today if you have not already done so.

Remember we are at your service, if there are any problems you do not understand don't be afraid to ask us to help you solve them. There will be no charge if you are a subscriber to the Utah Farmer. Address all mail to the Utah Farmer, Lehi, Utah.



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1904.

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EVERY  
SATURDAY.

VOLUME XII.

# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region.

COMBINED WITH THE DESERET FARMER AND ROCKY MOUNTAIN FARMING.

LEHI, UTAH, SATURDAY, FEBRUARY 5, 1916

ONE DOLLAR

A YEAR.

FOREIGN  
SUBSCRIPTION  
\$1.50

No. 27

## Where Alkali Reigns

By Frank S. Harris.

Never was the reign of monarch more supreme than is that of alkali where it is present in the soil in sufficient quantities to exercise its sovereign power. The king on his throne may have been able to hold in his grasp the lives of subjects and to advance or retard the progress of his people; but numerous natural, social, and economic forces existed over which he had no control. Alkali, on the other hand, may determine absolutely whether or not any living thing will be produced in the realm where it bears sway. It may prevent all plant growth and thereby exclude animals and even man, or it may choose its favorites from all the plant kingdom, allowing one plant to grow here and another there according to its caprice.

Alkali in the soil is more or less widespread over the entire arid and semi-arid portions of the earth; these embrace more than half the land surface of the globe. It is, therefore, of no small importance to the agriculture of the world. The rich valley of the Nile, the fertile lands of the Mesopotamia, India, China, South Africa, and the Western part of the Americas all have sections where the alkali problem is paramount.

### Nature of Alkali.

Alkali does not necessarily refer to the chemical reaction of the soil wherein it is not acid. A soil may have an alkaline reaction without being what is spoken of as an alkali soil. The latter condition may be caused by any soluble salt which is present in large quantities regardless of the chemical reaction of the salt. In other words the statement that a soil contains alkali means that there is present more easily-dissolved material than the ordinary plant can tolerate to best advantage.

Of the numerous substances found in the soil, most are comparatively insoluble in water. They are dissolved but slowly by the combined action of weathering agents and root secretions working with the soil water. They become available only as fast as used by plants. A number of compounds are found that are very readily dissolved in water and if present in the soil, the soil solution will have a high concentration. These compounds are among the most common substances found in kitchen, laundry, and medicine chest. There is nothing mysterious about them; they are simple every day materials that are useful to man in numerous ways. The fact that they render soils non-productive if present in too large quantities, does not detract from their usefulness in other respects. This is understood when we realize that the most common soil alkalies are (1)

common salt, (2) Glauber's salt, (3) salsoda, and (4) Epsom salt. A number of other well known substances are often present, but those mentioned constitute a large part of what is called soil alkali.

The relative proportion of these salts varies greatly in different regions. In one section, common salt predominates, in another, Glauber's salt; usually three or four other salts are present.

When the rock which now makes in these seas. When these layers up the mountains was being laid down, certain formations were deposited as layers, or strata, in the water. Some of these layers were deposited in ancient seas where the water contained even more dissolved salts than the ocean contains at present, and as a consequence a great deal of soluble material was mixed with the sandrock and shale formed

the land is made useless until it is reclaimed.

### How Alkali Affects Plants.

"How can a little harmless salt in the soil prevent the growth of crops?" is often asked. Yes, how can it? The exact nature of the injury is not in every case understood, but sufficient is known to help us materially with the problem.

The plant sends its roots throughout the soil where they take up food and water which enable it to grow and perform its functions. Plants use proportionately much more water than do animals. For example, a wheat plant growing rapidly takes up through its roots and gives off through its leaves every day several times as much water as its own weight. Since so much water is used everything must be favorable for its absorption from the soil.

By a well known law of nature, water passes through animal and plant membranes from a dilute to a strong solution. That is, if the sap inside the roots is stronger than the soil solution outside, water passes readily from the soil into the roots. This is the condition which exists in the normal soil. If, on the other hand, the soil contains so much soluble material that its solution is more concentrated than the sap of the roots, water passes from the plant out into the soil and the plant wilts and dies. This is the condition which exists when the land is alkali or, in other words, contains too much soluble material. Even when there is not sufficient alkali to kill plants, there may be enough to greatly hinder growth and decrease the yield of crops.

Injury to plants usually manifests itself at or near the surface of the soil where the concentration is likely to be greatest. This is especially noticeable in trees and other plants growing in the same place for a number of years.

The alkalies, in addition to affecting crops directly, have considerable influence on the soil. Salsoda, which is called black alkali, is particularly injurious in this respect, since it dissolves humus from the soil and destroys its tilth. Most of the other alkalies also injure tilth.

### Resistance of Plants.

Plants vary greatly in their relative resistance to alkali, some being sensitive to very small quantities of soluble material while others are able to resist comparatively high concentrations. Indeed, the presence of alkali in a region is usually first discovered by examining the nature of the vegetation growing there. Certain salt-grasses and salt weeds thrive after the concentration has become so

(Continued on page 7)



1.—Tracts like this can not be used for crops until part of the alkali is removed from the soil. 2.—An alkali spot where nothing would grow surrounded by a heavy growth of salt-weed. 3.—Formerly productive land on which all vegetation except Greasewood and salt-grass has been killed by alkali.

### Where Alkali Salts Come From

The source of all these salts in the soil is a puzzling question to the farmer who wants to know how common salt and washing soda could have been spilled on the ground in such large quantities without completely exhausting the grocer's supply. He thinks of these "store" compounds as having no relation to the land, but as encroaching and causing trouble where they have no right to be.

As a matter of fact these substances may be as much an integral part of the soil as any other ingredient composing it. The soil and the alkali it contains have a common origin—the mother rock from which the soil is derived. True, alkali is often dissolved from one place and concentrated in another where it is found in much larger quantities than in the original rock, but it is as much a part of the soil as any of the other materials.

were raised to form mountains, they retained their soluble materials; and as the rocks decomposed into soil these materials became part of the soil.

In regions of high rainfall the soluble materials are leached out and carried in streams till finally they reach the ocean. In arid regions where precipitation is small, the rock and soil are not leached and practically all the soluble material in the rock must be retained by the soil. This is concentrated in the lower lands where the salty water is evaporated.

Many local alkali spots are formed by the uplands being over-irrigated and thereby leached of its soluble salts which are concentrated in the soils at a lower elevation. Often if the salts remained diffused throughout the soil they would not be sufficiently concentrated to do injury, but when they are accumulated from a considerable area into a small tract,



## DAIRYING

### DAIRY RECORD

Here is a summarized report of the dairy of the Utah State School for the Deaf and the Blind. It includes only the cows that were kept a year because five of the herd were killed on account of age and being unprofitable, consequently they did not finish the years record. The last named, Beauty, had only 260 days for her record as she was not milking before April, and the 11th named, Goldie, had only 278 days during which time she had a very bad case of pneumonia.

The fat was computed from an average percentage of 6 tests of composite samples, taken for from 5 to 9 consecutive days during different months of the year and including one official test on 6 of the cows for 7 consecutive days. The butter was figured on an 80 per cent fat basis and was figured at 25 cents per pound of churned butter. The skim-milk was figured at 10 cent per hundred and the calf valued according to the breeding and sex from \$5 up to \$50.

The cost of care and feed was tak-

en from total dairy expense including \$80 a month for work all feed fed all pasture and interest at 8 per cent on money expended for barn. I figured the fertilizer would pay for the water, salt, medicine, milk sheets and incidentals. The bran was figured at \$1.25 per hundred, the pasture at \$2.00 per month per cow, the hay at \$10 a ton, meal at 3 cents per pound, beet pulp at 80c per ton, mangels at \$2.50 per ton and straw at \$6.00 per ton.

As all the cows were fed together there was no way of telling exactly what it cost for individual cows but I divided the total expense among them individually according to estimated size.

This is an example of what the scale and Babcock test will do for the dairyman. Here were 5 out of 19 cows that were not merely getting free board and care but some were eating up the profit of good cows.

A complete daily record of the whole herd for 2 years is available to anyone who will call at this school.

Sterling E. Price (in charge.)

### Yearly Report of Dairy, Utah State School for the Deaf and the Blind Ogden, Utah, January 1, 1915 January 1, 1916.

Name of Cow	Age	Calves	Days in Milk	Milk	Butter Fat	Butter Churned on 80% Basis	Total Value of Products Including Calf	Cost of Care and Feed	Clear Profit
Bird	4	1 heifer	291	7650.3	459.01	573.7	165.07	86.78	78.29
Lily	4	1 heifer	245	5134.5	323.47	400.4	117.23	86.78	30.45
Charley	old	1 heifer	303	7920.6	380.83	473.5	131.30	86.78	44.52
Jersey	7		334	9348.4	560.90	700.1	184.35	86.78	97.57
Er	3	1 male	298	5789.9	330.02	412.0	113.79	75.30	38.49
aid	3	1 male	271	5407.3	324.43	400.5	110.54	76.80	33.74
Princess	3	1 male	259	5298.6	322.51	400.3	130.42	76.80	53.62
Damsel	6	1 heifer	320	6049.1	372.62	465.8	172.60	72.45	100.15
		2 heifers							
Daisy	5	1 male	316	6541.3	399.01	498.7	196.21	85.00	111.21
Buttercup	8	1 male	290	6105.4	317.48	396.8	130.30	83.50	46.80
Lady	4	1 heifer	295	6789.0	356.02	445.0	157.04	86.78	70.26
Goldie	2	2 males	278	4491.1	264.97	331.2	112.29	86.87	25.51
Doe	6		350	6111.0	391.10	488.8	128.31	76.78	41.50
Fawn	5	1 male	285	6736.0	373.18	466.47	148.36	86.78	61.58
Beauty	2	1 male	260	5226.6	296.35	370.4	102.83	72.40	30.43

### HOW TO RAISE A DAIRY CALF.

Prof. G. W. Barnes, Arizona A. C.

Select your best heifers and raise them on skim milk. In case you have more than you want you will find good sale for them at good profits.

What are a bank's resources?

Its capital? Its surplus?  
Its loans and cash? Yes—

But greater than all these is that tremendous force known as REPUTATION, without which no financial institution or business house can hope to endure.

**Walker Brothers Bankers**

SALT LAKE CITY

You can bank here by mail.



This is a question upon which dairymen differ. Some do not let the calf nurse at all. Others prefer to let it nurse once; some will permit it to remain three or four days with its mother. When it is impossible to feed the calf several times a day, it does very well to leave him with his mother for the first two or three days.

1st Week: The calf should be fed at least three times a day, and during this time should get nothing but fresh, warm, sweet milk (preferably from its own mother) and should receive from eight to ten pounds per day.

2nd Week: Skim milk should be given gradually to replace the whole milk. Start by making the allowance one-third skim milk; in four or five days make it one-half skim milk, and within ten days or two weeks make it all skim milk.

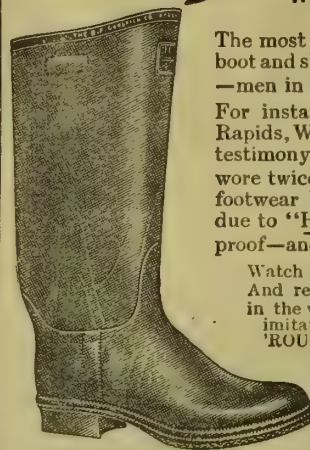
4th Week: By the time the calf is four weeks old it should be getting a full allowance of skim milk—from 12 to 18 pounds of skim milk per day—depending upon the size and thriftiness of the calf. At this age it will begin to eat bran and nibble at hay, which should be provided. When skim milk is added to the ration it is well to dissolve in it.

## We want you to read these letters!

If you wear rubber boots you'll be interested. They give some remarkable opinions on

## Goodrich "HIPRESS"

THE ORIGINAL  
Brown and White Rubber Footwear  
"With the Red-Line 'round the top"



The most convincing testimony in the world—just what boot and shoe wearers like yourself think of "HIPRESS"—men in the United States, Canada and Alaska.

For instance—Wm. F. Gleue, of Gleue Bros., Grand Rapids, Wis., who KNOWS Footwear, told us they had testimony given under oath showing where "HIPRESS" wore twice as long as other boots and shoes. "Said their footwear business last year increased actually 25%—due to 'HIPRESS.'" You can't get away from such proof—and we're going to give you more.

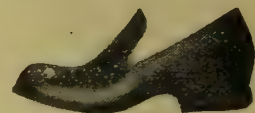
Watch this space for further word from "HIPRESS" users. And remember—"HIPRESS" is the only Rubber Footwear in the world MOLDED INTO ONE SOLID PIECE! Avoid imitations—the genuine always has the RED LINE 'ROUND THE TOP.

The B.F. Goodrich Company  
AKRON, OHIO  
Makers of the Celebrated Goodrich Automobile Tires  
"Best in the Long Run"

When you buy Rubbers insist on the genuine Goodrich-made

## "STRAIGHT-LINE"

for best fit—longest wear



each feed about one teaspoonful of blood flour or meal, and increase gradually so that when the calf is getting its full allowance of skim milk it is receiving about two teaspoonfuls of blood flour or meal. This blood flour not only adds nourishment but tends to prevent scours. In addition to this you can feed the calf kafir chops, ground corn, and other grains to take the place of the butter fat which has been removed.

In order to feed a young calf successfully, and avoid scours and other trouble, have:

1. Everything which comes into contact with the feed absolutely clean.
2. The calf fed regular amounts at regular intervals.
3. The milk sweet as nearly as possible at blood heat. A temperature of 98 degrees to 100 degrees is about right.

"HAPPY NEW YEAR" to you Mr. Brown. How are you doing with your hens?

"Not very well but my boy is doing fine."

"How so?"  
"Why you see I bought the hens and gave them to the boy, I feed them, he sells the eggs to me, and eats them himself."

Learn how to disinfect and then do it.

## \$15 95 ON TRIAL American CREAM SEPARATOR

A SOLID PROPOSITION to send new, well made, easy running, perfect skimming separator for \$15.95. Skims warm or cold milk, making heavy or light cream. Bowl is a sanitary marvel; easily cleaned.

ABSOLUTELY ON APPROVAL  
Different from picture, which illustrates our large capacity machines. Western orders filled from western points. Whether dairy is large or small write for handsome free catalog. Address: AMERICAN SEPARATOR CO. Box 4098 Bainbridge, N. Y.



## ROWE'S HOG OILER

New Idea  
Only Oiler made without valves, cylinders or wheels. Can't clog, stick, leak or get out of order. Guaranteed 5 years. Use crude or Medicated oil. Kills Lice; keeps pens and yards disinfected. One Oiler cares for 30 to 60 hogs. \$9.25 delivered.

## CALCO HOG POWDERS

is a Hog conditioner and Worm expeller. 25 lbs., \$2.00.

HEALTHY HOGS MORE PROFITS  
Catalog Sent Free.

CALLISTER-KORTH CO.  
McIntyre Bldg. Salt Lake City, Utah



**EAR PERFECT TAGS**  
**ATTACHED INSTANTANEOUSLY**  
 Name and Address. Numbered if Desired.  
**LEG BANDS for Poultry, Pigeons, Turkeys**  
**SALT LAKE STAMP CO. Salt Lake, Utah.**

**\$45 Saddle for \$36 Cash**

Our latest Swell Fork Saddle, 14 inch swell front 28-inch wool lined skirt. 3-inch stirrup leather, 1/2 rig. made of best oak leather, guaranteed for ten years; beef hide covered, solid steel fork.

**The Fred Mueller Saddle and Harness Co.**

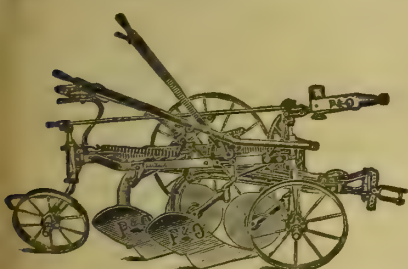
Dept. A.  
 1413 Larimer St.  
 Denver, Colo.  
 Send your name for our 1915 catalogue, now ready.



The Celebrated Mueller Saddle

**P&O**  
**Diamond Riding Plows**

Sulky or Gang, right or left hand, all standard sizes, all styles of bottoms, according to the requirements of different sections. For eighteen years the leading riding plow in this country. "It's the Way We Build Them."



High lift, light draft, automatic control and perfect bottoms. Removable dust proof wheel boxes with hard oil screw caps. Beams are high in the throat, giving ample clearance in deep plowing. Double bails hold plow steady and rigid, making it run absolutely true and leaving a smooth, level furrow bottom. Only truly automatic rear wheel control ever put on a plow; holds rear wheel rigid regardless of ordinary weaving of team, but allows it to castor naturally on the turn, making a square turn possible.

Collars and lynch pins inside the screw caps take end thrust off of boxes. Bottoms so hung in frame as to throw weight of plow, dirt and driver all on wheel, insuring light draft. Spring washers prevent nuts from working loose. High grade coulters with chilled cone take-up bearings, and quickly adjustable clamps.

Powerful foot lift. Hitch adjustable without removing bolts or pins. Bottoms are built on double ribbed malleable frogs, the strongest made; strong in the bend where steel frogs are weak. Different types of P & O bottoms interchangeable. P & O Diamond Plows have every convenience and adjustment for the performance of perfect plowing.

Ask Your Dealer or Write Us.  
**Parlin & Orendorff Co.**  
 Canton, Illinois.  
**Utah Implement Vehicle Co.**  
 Sales Agents  
 Salt Lake City, Utah.

**Rural Organization as a Basis For Rural Credits**

Synopsis of Lecture Delivered by Frank B. Stephens of Salt Lake City, at the Farmers' Convention at Logan.

The amortization system of farm loans consists in adding to the least obtainable rate of interest a small payment upon the principal, semi-annually, also a small payment for expenses of operation and surplus fund. The loan is thereby entirely paid off after a term, ranging from thirty to ninety years. By adding to the agreed rate of interest one dollar and fifty cents per hundred annually for amortization, and fifty cents per hundred for expense of operation the mortgage will be entirely paid at the end of thirty years. In Germany, with smaller amortization, the period ranges from forty to sixty years; in Denmark, where the government borrows money at three and a half per cent and loans to the farmer at three per cent, the payments upon principal are so small that it takes over ninety years to pay off the loan. The Danish government has, however, made a special feature of encouraging the purchase of small farms and if a farmer has one-tenth of the price of a piece of land and can show by rigid examination his probable ability to make good, the government loans him the other nine-tenths. There is no question but that the amortization plan of loans should be adopted in this country. The rates of interest on farm loans in the West and South are extremely high. There is always present the spectre of the mortgage, which matures in three to five years, with the attendant expense and trouble of getting a renewal or an extension, usually involving a two per cent commission, an attorney's fee, and abstract fee, recording of new papers and a large waste of time on the part of the farmer in attending to the renewal. There are, however, some reasons for high rates of interest and some obstacles in the way of long time loans on the plan mentioned, which must be removed before the system can be put into successful operation.

Rates of interest are determined by certain fixed financial principles, chief among which is the question of absolute security and ability to cash the security when desired. The government of the United States borrows money at two per cent for the reason that the holder of a two per cent government bond knows that he can get his money any minute; the Pennsylvania Railroad Company borrows money at four per cent; many municipal corporations do likewise. On the other hand, the bonds of the Western Pacific Railway Company, bearing five per cent interest, are only worth fifty cents on the dollar. The farmer in the Corn Belt, Illinois, Iowa, Eastern Kansas and Nebraska borrows money at five per cent by paying a small commission to a local agent; all he needs is the amortization plan, adding to the five per cent interest a small payment on the principal each year. You put money in the Savings Bank at four per cent. Rates of interest, as you see, are

based principally upon security, and ability to cash the security.

The farming operations in the Corn Belt are standardized; grain, hogs, dairys—land values are stable. The element of uncertainty is reduced to a minimum and farmers generally conduct their operations along definite business lines. Before the Utah and Idaho farmer can obtain low interest rates and long time loans he must measure up to a higher standard of efficiency and prosperity. He must become a business man, with a well, definite, carefully worked out business policy and management. When the German farmer applies to a local landshaft association for a long time loan the first thing the loan committee does is to examine his books for six years last past in order to determine the amount of his net average annual income. He must have a balanced equipment of cows, pigs, and horses. When the books of the American farmer for six years last past show his business operations he will have begun to measure up to the standard which will entitle him to lower rates of interest.

If the landshaft system is put into operation, whether by the United States Government, or by state agencies, or by independent local organizations there are going to be very many disappointed applicants. The man who needs money the worst is the least likely to be able to get it and will pay the highest rate of interest; those who need money the least will have no trouble in getting the loans at a low rate of interest and for as long a time as they want. Some of us when we go to a bank for money have to pay eight per cent, others get all they want at six per cent for the reason that their business operations and securities are such that the banker knows he can call his loan any minute and get his money. What can our Utah farmer do to put himself in the favored borrowing class? Of course he must make his farm plant efficient so far as production and methods are concerned, but this alone will not make him prosperous. Prosperity depends now as much or more upon business efficiency of the farm as upon productive efficiency, and we can never have business efficiency upon the land without organization for mutual benefit. The farmer is a manufacturer, turning the energy of the soil into a manufactured product in the shape of beef, butter, grain or other produce for the purpose of sale. All other lines of business are organized. In the past twenty five years business has become organized to such an extent that the salesman of woodenware will not quote you the price of meat skewers, except subject to trust prices. Not only has wealth organized for the purpose of exacting the highest possible profit from those with whom it deals, but labor has organized for the purpose of exacting the highest wage possible. The farmer and others that are unorganized are between the upper and the nether mill stone. Organized capital from

(Continued on page 9)

**DUCK BACK Harness OIL**



Will prolong the life of any set of harness. The sooner used, the better. Strength and

**Pliability**

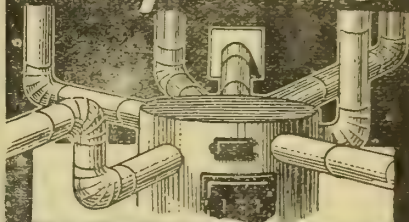
are what you want in harnesses. This oil keeps dirt and dampness out and life in.

**Utah Oil Refining Co.**

Refiners

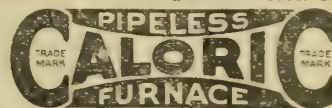
Salt Lake City, Utah.

**Why Clutter**



**Your House**

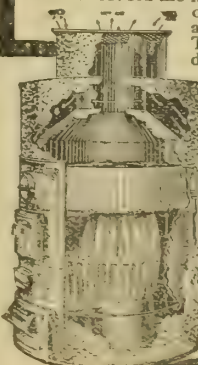
With pipes and flues? They cost money for labor and material, mar your house and waste fuel. Heating pipes are needless. The Caloric Pipeless Furnace heats the entire house with just one register. You get the greatest amount of heat with the least fuel consumption and the heat is uniform throughout the house. The



can be easily installed in any house, new or old, because you don't have to cut holes for pipes. It burns coal, coke or wood and is guaranteed to save 35% of your fuel. You can easily and economically have this city comfort in your farm home. Avoid the labor of building fires, of carrying fuel and ashes up and downstairs. The Caloric lessens fire danger. Will not spoil produce in cellar.

**Guarantee**

The most unusual ever written. If the Caloric is not entirely satisfactory we'll make it so any time within one year. You take absolutely no risk. Write for Free Catalog. Invest now. If there is a better get our illustrated descriptive catalog free. The Monitor Stove & Range Co. 337 West St. Cincinnati, O.





## Field and Farm

### NATURE OF SUMMER WORK FOR AGRICULTURE TEACHERS

I. B. Ball, Granite High School.

Summer work for Agriculture Teachers comprises: Home-School Projects, Boys Club Work, Parent Advisory work, collecting material for winter laboratory work and for a departmental museum, school garden, and the instructors own farm.

Home school projects. By this is meant a definite piece of work originating in and connected with the class work but carried out on the home grounds under the direction of the agricultural instructor. School credit is given.

2. Boys Club Work of Grade Schools and High School. This work is organized by special visits to the school in the early spring by the instructor for informing and organizing the clubs. It requires at least a worthy call at each home during the summer. It may end with local fairs and prizes in each school, a district fair at the High School for the winners in each grade school and a state fair exhibit for the High School exhibit winners.

3. Parent Advisory Work. A visit to the boy, generally necessitates a trip over the farm with his father and son. On this trip over the farm the farmer springs all the hard chest-nut problems, he has been wrestling with for years, to sort of get an angle on what the "Professor" knows. Also the parent-farmer often really needs some help and information on a diseased crop or an insect pest, etc. This is the instructor's opportunity for service. He gains also the good will and respect. He is a sort of assistant county agent and should work close to that official.

4. Collecting material for class laboratory work and departmental museum.

5. It is almost uniformly recommended in United States, that School gardens should accompany instruction in agriculture in High School. Some of this work is being done in Utah. It has some very good arguments but

to my mind the students time spent on a school garden in general farm work could more wisely be spent at home on his project or his fathers farm but under the supervisory visits of the Instructor. In the spring omit almost all school laboratory work in agriculture and send the boys home early to get the spring work under way. This gives time for the instructor to get out on visits to the home if he has motor transportation.

It would seem that the thing needed, is a School farm, rather than just a school garden. We do need a few pens of standard breeds of poultry to keep egg records on which to experiment with a few feeds and in crate fattening, etc. We do need a few pure bred hogs and shoats for judging and for some simple reeding test to illustrate balanced and unbalanced rations. We do need a dairy cow or two, for judging, for records, for tests, for feeding rations. Likewise a few sheep and a good horse. We do need in High Schools facility for good hot-bed work and for running incubators and brooders, etc.

Yes, we do need this primary equipment and facility. But who thinks it can be provided and cared for, unless the needed school farm provides for the residents of the agricultural instructor thereon? Who can incubate chickens in poultry laboratory work, with no one at school from 5:00 p. m. to 8:30 a. m.? Who can run a hot-bed on a like arrangement?

6. Instructors Home Farm. If the instructor lives upon the School farm, he should have charge of the farming during the summer. He would not have any time for a farm of his own.

But if he can run a farm of his own, it is said to add much to his prestige, as a teacher of agriculture. Since this is true, it pays where possible to live on and work a farm, leased or owned.

But with classes at High School; with spring afternoons, and Saturdays, busy in visiting the boys at their homes, with even the smallest school garden, how is one to run a farm of his own, location may be five or more miles from school, so that he is not home noons, leaves home at 8:00 a. m. and arrives back at from 4:00 to 6:00 p. m. or later if he visits around a boys home projects? And is off again Saturday's?

And if the instructor does attempt to farm on his own hook, how much chance will he have to make it pay, hiring all the work done, (or most of it) and not being about to supervise its execution? And how is he to run this farm in a model way under the circumstances? And if he runs it not so well as other farms where the farmer spends all his time at home, what will be the comment by the neighbors. Will they always make a just allowance? Is it wise to need allowances?

So, when all is said and done the status of the Instructor is not fully settled. The drawing teacher is not required to open a studio; The Physics teacher to operate electric lighting plant, the chemist to run a smelter, or the English teacher to write short stories and novels and to edit a successful monthly.

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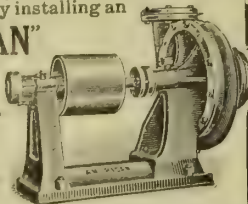
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### Advantages to the Agriculture Work.

1. It ties up the book work with the actual home farm work of students.
2. It makes the summers practically a laboratory period for agricultural students, in problems of soils, insects and control, plant life and diseases, animal life and management.
3. It connects the home and the school. Demonstrates to parents the definite practical value of the agriculture work.
4. Increases interest and enrollment in the schools in general and in the agricultural department in particular.
5. It Vitalizes School work and stimulates the community industries.

(Concluded next week)

### RURAL TELEPHONE SERVICE

Until recently the rural telephone has largely served as a medium of exchange between farmers, and for ordering supplies from dealers in town. But it has been demonstrated that the rural telephone can easily perform other service of equal importance. There are now country districts where the telephone company has undertaken to supply a daily news service. At a certain hour the telephone rings five times. That is the news signal and every interested subscriber along the line takes down his receiver. Then the central operator gives the weather report, a condensed market summary and important news. It takes but a short time to give this information to every subscriber, and the line is tied up only for a few minutes.

This idea may be carried still further. Where the telephone company is owned and operated by the farm subscribers themselves, the manager at the central office may act as a market agent. The subscribers advise him of the products they have for sale, and those they wish to buy. Nearby dealers and others who are "on the market" send him their wants. A complete list of the products demanded is made up and read over the phone. The subscriber then notifies the manager of the business he will care for. Farmers are able to sell in 15 minutes products which might take half a day to dispose of, if each buyer had to be personally visited. It is a great idea. There are many other labor-saving and profitable schemes of a similar nature which can be worked

out equally well over the rural phone.—Orange Judd Farmer.

### WHERE ALKALI REIGNS

(Continued from page 3)

strong that none of the ordinary crops can grow.

A number of crops are very resistant after they get well established; while the young plants are tender. Alfalfa is a notable example. It is not an uncommon experience for a farmer in an alkali section to be unable to start a new crop of alfalfa after plowing up vigorously growing old crop. After the first crop becomes thoroughly established, alkali rises to the surface but the heavy covering of the tap-root prevents injury. Sugar-beets can endure fairly large quantities of alkali after the plants get a start, but the seedlings are easily killed.

An experiment at the Utah Experiment Station showed that the resistance of a number of young crops stood in the following order: (1) barley, (2) oats, (3) wheat, (4) alfalfa, (5) sugar-beets, (6) corn, and (7) field peas. The older plants of these same crops would probably not have the same relative resistance. It has long been known that date palms and a number of such plants can endure a much greater quantity of alkali than the ordinary crops. In the Sahara Desert, land which would, on account of its alkali, seem unfit for any crop produces good date palms.

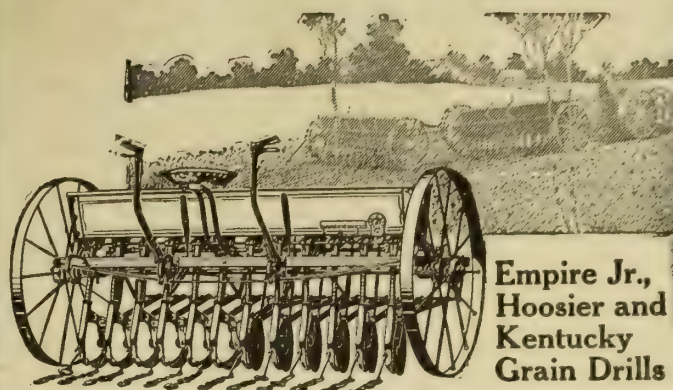
### The Advance of Alkali.

Nothing is more disheartening than to see the gradual advance of alkali on a farming community. Many sections may be found in the West where, because of improper methods, alkali is gradually rising from the lower lands to the higher and better land which is giving way foot by foot to the advance of a conquering monarch whose approach is more deadly than that of any barbarian horde; for truly the saying that "No grass would grow where the hoofs of Attila's horses tread" can be applied to the land conquered by the invader, Alkali.

As alkali approaches a community the most tender plants are first to die—perhaps some beautiful shade tree—then others go one by one and their places are filled by salt-loving weeds. The yields of the tender crops begin to decrease, then they fall off all together; the more resistant ones are attached next; and finally even they must fail. From year to year the farmer finds himself in greater and yet greater difficulties. He hardly knows where the trouble lies, he is only aware that prosperity does not follow his labors. Before he realizes that his farm seems to be ruined, it is too late to dispose of it and he is forced to abandon what he has spent years in trying to build up. Truly this is a heart sickening sight! Is there no hope?

When man was placed in the world he was given dominion, and a charge was laid upon him that he should subdue the earth. He must, therefore, be the master and conquer all difficulties. If pests invade his crops, if diseases attack his stock, if the elements conspire against him; yet must he conquer. And if the monarch Alkali disputes his right to till the soil and subdue it for his use, man must equip himself with the tools of the sciences and the arts and go out and make war on this great enemy.

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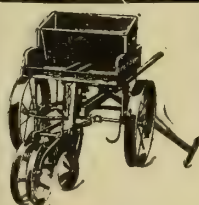
These points are clearly seen: Drills save seed at the start, because every individual kernel is planted right, with covering enough to protect it from cold or drouth. You needn't "play safe" by planting an extra quantity, for every seed has its chance. Drilling means regular planting, no bunching here and lack there—every seed has sufficient ground to support it. The seed starts, grows, and ripens all together. Uniformity—that's the word. Drilling does away with uneven stand, with half-ripe, half-green fields. Drilling gives you the maximum in grain, kernels all filled out and plump. That means top yields, top prices.

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The potato crop is an expensive one, requiring valuable seed usually high priced land and quite an amount of labor to bring to the harvesting period. It is therefore very necessary that it should be started right by getting in the seed at the proper time, delivering the seed of the size desired into the ground without injury to the "eyes," spacing it at equal distances and covering it and rolling the soil over the seed in such a manner as to secure the most satisfactory results. Write to the general agents, **Miller-Cahoon Company, Murray, Utah, and Idaho Falls, Idaho.** adv.

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We guarantee every subscriber against loss thru dishonesty or attempted swindle by any advertiser in this publication. We do not attempt, however, to adjust trifling differences between the subscribers and honest, responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within thirty days from date of the transaction, and the subscriber must have mentioned Utah Farmer when writing the advertiser.

These stormy days you should be making out your plans for the coming spring and summer. Good plans need to be well thought out. Do some reading of farm books and farm papers. Make every hour count even if it is stormy.

This is the time of the year when the farmers should be perfecting their organizations. "Get Together" and discuss community needs, and work together for each other's benefit. This is the spirit of the times. If you are not doing anything along this line, it is time for you to commence.

We would like to see some of our Utah people at the Northwestern Dairy Products Show. This is being given under the direction of the U. S. Department of Agriculture, and the different Agricultural Colleges of the Northwest. There is no doubt but that it will help create a greater interest in Dairy Products.

Encourage the boys and girls by allowing them to feed the birds. A great deal of the weed seeds that they would now be eating are covered by the deep snows, and it will be a kind act on your part, and will help teach the boys and girls a good lesson, if you will allow them to feed the birds. The birds, in turn, will pay for their food many times over in the service that they will render you next summer.

Now is the time that you can help your wife make some of the needed changes in the home. While it is storming out of doors, why don't you help her fix up the kitchen with some of the modern conveniences that will only take a very little material and your time?

#### FINISHED PRODUCTS OF THE FARM

The agriculture of Utah is rapidly becoming more stable due to the fact that manufacturing establishments are being developed to convert the raw products of the farm into the finished articles of commerce. The production of sugar beets is one of the surest ways of making the farm pay. The State has at present nine sugar factories where the beets are converted into sugar, and two more are being constructed. Utah's dairy products, especially condensed milk, are gaining favor far and wide. Fruit and vegetable canneries, pickle factories, meat packing establishments, flour mills, and many other such industries insure a market at home for the products of the land.

#### WASTE OF FARM MACHINERY.

Who pays the machinery bill? It is practically conceded by men who have made a study of this question, that more machinery rusts out than wears out. Our attention was called the other day, while traveling on one of our railroads, to the great number of machines that were left standing in the field. We noticed mowing machines and plows entirely covered with the exception of the seats, and many other pieces of machinery were partially covered with snow, and the farmer is the one who must pay for all this loss.

During this season of the year is the time to go over machinery and secure new parts for those that are giving away, or are partly worn out. Do not discard an entire machine when a few small parts will make it practically new as far as the service is concerned. Keep your machinery well in repair, and provide some way of protecting it from the storms when it is not in use.

#### WHEN WILL WE LEARN

Word comes to our office of agents or canvassers who are in certain parts of the state trying to sell stock in a machinery company which from all we can learn has no merit. When will we learn to avoid these oily tongued promoters, who go from place to place working their schemes. Some of these promoters or agents will make all kind of promises, anything to make a sale. Many times the house they are working for would fire them at once if they knew the unreasonable promises they make. To be more definite, an agent for a loan company made a promise to a certain farmer that he could borrow \$1500.00 but the man was not entitled to over \$800.00 on the property he was offering as security, the agent made the promise in order to get a contract, make a sale, and get his commission. Nearly all responsible companies that send out agents give them printed instructions, rules, etc., and if the agent is offering more than these you can depend that the company will not stand good for it. When will we learn that the other fellow is not giving something for nothing. Reason out a proposition and see if there is merit to it and don't be afraid to turn down any man who, in your judgment, is not entitled to do business with you.

#### DR. WIDTSOE'S WEEKLY MESSAGE.

##### SNOWBOUND.

Upon the just and the unjust, from the north to the south, over Utah lies a thick layer of snow. The earth is warming below the snow, expanding and contracting with the rise and the setting of the sun. Soon the snow will begin to melt. Into the soil the water will sink deeply and hold in close embrace the tiny particles and dissolve from them the rich plant food. As the young spring awakens and rises from its sleep, the stored soil water will become richer and richer. At length the crops will be planted. The young roots will bathe their tiny ends in the rich solution, and drink of it, and send new life into the stems and leaves above ground. Roots and stems and leaves will spread and become great in response to the stimulus of the soil that has long been well moistened. The strong plant, well nourished from its infancy, will smile at the winds and laugh at the heat, and with moderate care will yield an abundant harvest.

Up in the mountains the snow will lie longer, but the sun will have its way, and at length in the spring, the snow will begin to melt. Under the snow it will trickle, to issue at the end of the snow bank where the ground is bare. It will also sink into the soil. When the days are hot the rapidly melting snow will fill the streams with roaring torrents, but some will remain to sink into the soil. And, throughout the spring and summer, the water will move through the soil, slowly, inch by inch, into the canyons, to keep the streams supplied for the busy husbandman.

On the north slopes and in deep places the snow will lie far into the summer, until the hot August sun will melt it to feed the streams when the midsummer valleys are hot and thirsty.

Then when the harvests are large, and prosperity reigns, the good snow will be forgotten except by the philosophers and those whose grateful hearts look back to the causes of plenty.

Lest we forget, then, thank God for the snow.

This kind of weather requires just a little extra attention to your animals. You will find it profitable to do this, in the increased returns and work they will be able to do for you.

Have you taken stock on the farm yet? Right now is the time, while you are not busy. It will be a guide to you in working out your plans for the coming year, and if it takes several days to get all the details worked out properly, you will find that it is time well spent.

Winter time can be profitably spent in reading some of the leading books on agriculture. If you don't know which ones to buy, we will be glad to recommend some to you. Just suggest along which line you are the most interested, whether it be Livestock, Irrigation, Dry-Farming, Farm Management, etc., and we will tell you the names of some of the best books on that particular line of agriculture.



## "RURAL ORGANIZATION AS A BASIS FOR RURAL CREDIT."

(Continued from page 5)

above and the organized labor beneath takes from them too large a proportion of the price the consumer pays, and until the farmer takes charge of his own business and organizes to counter the organization of those who sell him what he buys and buy from him what he sells, he will not attain the prosperity which the money lender demands in order that he may be sure of his principal and interest. Organization has been the foundation of the prosperity of the German and Scandinavian farmer. Twelve Hundred Thousand cows in Denmark, the milk of over a million of them sold through co-operative agencies. The Danish farmers own the ships that carry their butter, eggs and bacon to England. They have their own agencies in the large cities of their own and other countries. Organized money can buy wheat, store it in an elevator and borrow money enough on it, at a low rate of interest, to hold it as long as they please, for a favorable price. Minnesota farmers have already begun to do this for themselves. Agricultural prosperity, except in regions like the Corn Belt where they are close to market and their products are standardized, will not be possible until our farmers develop the co-operative spirit and take their business into their own hands. Organization must, however, be upon a business basis. You can not start a creamery with one hundred cows, nor a canning factory without loyal support, and when we do organize we must do it ourselves, make our own contracts and not listen to the oily tongue of the stock peddler who is capitalizing the terms "Co-operation" or "Rural Credit."

Clarence Poe, the author of a very recent work on farmer co-operation, very tersely distinguishes between ordinary corporations and the co-operative movement. He says "A corporation, as ordinarily known, is an assemblage of dollars for the purpose of hiring men to make profit for the dollars, while co-operation is the assemblage of men for the purpose of hiring dollars to make a profit for the men."

The farmer has so long been exploited by organized wealth that those who handle his products and those who live in cities generally have lost respect for him. You have not much respect for a man who will permit you to put your hand in his pocket and take what you please.

Finally, we who own land and try to make a living off of it must have a higher conception of the worth, dignity and opportunities of our profession. Those who produce the wealth of the country should be the true aristocrats rather than those who haul it to market and traffic in it. Rightly looked upon there is no business which demands so much good judgment, intelligence and ability and which is entitled to as much respect as that of farming. Ninety per cent of the work of the one who lives in the city is laid out for him, according to fixed rules; compare the work of the bookkeeper, the artisan, the factory employee, or even the merchant, the lawyer or the banker with that of farming, if properly con-

ducted, the bookkeeper makes trivial entries of trivial transactions; the manufacturer, if he follows fixed rules will turn out a merchantable product; the conditions the farmer meets may change every day,—the handling of the soil, the feeding and breeding of stock, the marketing of the products, the buying of supplies calls for a high order of good judgment, intelligence and education, and when the farmer becomes a business man and takes his business into his own hands, stops the waste, puts his farm machinery under cover instead of allowing it to rot in the field, in short conducts all of his business upon such lines as other lines of business are required to be conducted in order to be profitable, he will attain the prosperity which will bring the comforts of the city to the land, keep his children at home and enable him to demand and receive the consideration from those who purchase his products and lend him money, which he deserves.

There is also an artistic side to farm operations which properly viewed should challenge our admiration. The life in the seed develops into the field of waving grain, the beautiful tree. There is as much art in creating an ideal of a farmstead, a beautiful animal and developing the thing itself as there was in putting the same upon canvas by a Rosa Bonheur.

Mr. Stephens urged most strongly the beginning of co-operation by the organization of saving and loan societies upon the plan of the Credit Union or the Raiffesen Society, in which we cannot possibly go wrong and from which will develop here, as in Europe, other forms of business co-operation as the needs of the particular community require.

### WINTER AND VENTILATION.

E. W. Hamilton, Idaho Experiment Station.

Winter is the testing time of ventilation conditions for both man and beast. Houses and barns are kept tightly closed to make them warm. If ventilation is not provided for the tendency to colds and lung disorders is strong. Scientists tell us that the causative agents (germs) of these maladies are very generally present but that the animal body is usually able to resist them unless reduced in physical tone. Fresh air is one of the greatest invigorators and foul air one of the greatest devitalizers. The need of ventilation is apparent.

When is a dwelling properly ventilated? When a person coming from the outdoors notices no odors or sense of closeness. Visit a living room with a fire place and a cheery fire. Note the airy feeling, though the room may be crowded. Then not the feeling on entering your own living room may be crowded. Then note the place, but every one can leave the bedroom windows open at night and can air the house thoroughly two or more times a day or else arrange for some continuous ventilation. Perhaps frequent thorough airing is the cheaper in fuel costs.

When is a barn properly ventilated? When the air is not distinctly foul to the nose and when no moisture appears on the walls. Some approved ventilating system should be provided for all tightly closed barns. Sheep barns must never be tightly closed. Sheep, because of their natural covering, need only protection from wind



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## The Perfection of Union Pacific System Service



Is not a chance—it is the result of the expenditure of millions of dollars in money and the working-out of a positive plan of betterments, which has extended over a period of many years—

As a consequence, the Union Pacific System has been brought to a state of operating regularity—the effects of which are felt through every channel of the service; the work goes on from day to day, and the public is assured of the full benefits resulting therefrom—

When you buy transportation, you buy it with the same economic conservatism you would use in purchasing government bonds or other dependable securities—

In traveling, you are entitled to stability—service, and protection, for every dollar you expend—

The Union Pacific System has been termed, "The Standard Road of the West;" it is "standard" in everything the world implies.

Six trains east daily; two trains north and northwest.

**CITY TICKET OFFICE, HOTEL UTAH,  
SALT LAKE CITY, UTAH.**

and storm. Their lungs like those of their ancestors in the mountain fastnesses must have free air of outdoors in order to keep healthy. Any inquires on ventilation of homes or barns cheerfully answered.



## THE HOME

### HOME ECONOMICS ASSOCIATIONS PROGRAM AND REPORT.

#### Program Suggestions for March.

Public Meeting.—Town Clean-Up.  
Rural Sanitation.—Talk by a Doctor or Health Officer.

Sources of Infection in Children and Adults.

County Health Statistics.

Reports of Health Talks from Housekeepers' Conferences.

#### Association Reports

Brigham writes that the course of lectures on nursing is one of the best things they have ever had.

Tremonton is having a book shower to help furnish their library shelf. The library is a shelf in one of the millinery stores. We wonder whether a "pattern exchange" similar to that conducted by Richfield women would not be an addition to this project.

Spanish Fork reports a fine meeting with Mr. Byhower of Salt Lake as the principal speaker on how to raise flowers. Correspondence courses are to be taken as a basis of future programs.

The Elsinore Association held an interesting Christmas meeting. They report as follows: "In December the members of the Elsinore Home Economics Club enjoyed a Christmas festival at the home of their president, Mrs. J. B. Hansen. A very interesting program was given consisting of an excellent talk on "The Spirit of Christmas Giving" followed by several musical numbers. The next was a "Jack Horner Pie" which consisted of a larger pumpkin filled with useful kitchen articles. Each one was attached to a ribbon which each lady

drew and received a useful Christmas gift. Mrs. Hansen then served a delicious luncheon all home prepared consisting of bread and butter, home-made sausages, French fried potatoes, home made mince meat pie, and coffee.

Richfield sends the following report: "We still have a real live Association here. The interest taken in the work and the good being done, is a credit to any town this size. One woman said she felt she couldn't miss a meeting. Others express themselves similarly. Another said she had learned through the Home Economics Association to fold clothes off the line and put them in the closet un-ironed. She had seen the time when she thought it almost a crime against good housekeeping not to iron every piece in the wash. So you see we do some good to some one. We closed the year with a rousing ball. Socially and financially it was a success. Our next meeting we turn over to the "Round-Up" people as it comes the third Friday in January.

St. George reports meeting of December 31st as follows.

#### Program.

The Spirit of Christmas Gift Giving, by Mrs. Zaidie Miles.

Quartet—High School Girls.

The Children's Christmas, by Mrs. Joshua Crosby, Jr.

Solo—Mrs. W. R. Pike.

Demonstration on Candy Making—Mrs. Chrissie Bleak.

"There were 65 ladies present. We have kept our meetings up regularly all summer with lectures and demonstrations that were very interesting and beneficial."

#### Notes to Associations

Miss Hettie White before leaving Millard County left a budget project which she hopes the women will take up. The many expressions of appreciation, both from men and women, offered to Miss White for her helpfulness to the homes of Millard County, were very gratifying, and it is to be hoped that in her temporary absence the seed sown will bear fruit. The garden contest which she inaugurated with the view of conducting canning demonstrations of home-grown vegetables, will be of great value to the homes, many of which are lacking the needed amount of mineral salts in their diet, according to Miss White's report.

Association officers will please fill out report blanks, returning same to Miss McCheyne, Logan, so as to reach her not later than March first. Under "Committees" put the name of chairman and any special pieces of work done in that line. In "Remarks" give name and number of correspondence courses taken, benefits of Association work in community, how the College can help in the coming year.

#### NOTES FROM TALK ON

#### NUTRITION OF CHILDREN

Given at the Delta Housekeepers' Conference by Miss Agnes Saunders, Department of Food and Dietetics, U. A. C.

Feeding should be regulated by development rather than by age. If

## A Vacation For the Farmer and His Wife

A GOOD REST AND VALUABLE INFORMATION FOR YOU AT THE

## Farmers' Round-up

AND

## Housekeepers' Conference

# Cedar City, Utah

# February 9-19, 1916

Subjects Discussed for the Benefit of the Farmer:

The Broad Principles of Utah Agriculture.  
How to Increase Farm Profits.  
How to Improve Methods of Marketing.  
Utah Farming and Stockraising.

LECTURES BY SPECIALISTS OF THE STATE AND THE NATION ON THE DISEASES OF THE POTATO.

Lectures and Demonstrations for the Housekeeper:  
Personal Hygiene, Physical Culture, Sanitation of Milk, Economical and Healthful Diet.

Lectures and Demonstrations by

## Mrs. Nellie K. Jones

Registration fee \$1.00.

## Housewives, Settle the Sugar Question

Before the methods of refining beet sugar were perfected, a prejudice against beet sugar existed. Until recently this prejudice to a degree has continued.

To test exactly the merits of the two sugars, to prove the value of either or both, the United States Government and several states conducted investigations. These experts report that beet sugar is equal to the cane article in every respect. All pure, refined sugars are the same—these experts say.

Some of the largest manufacturers of cakes, candies and fancy confections are using beet sugar. Chefs, bakers and cooks of renown have made tests, with the claim that a difference is not noticeable in refined beet and cane sugar.

Housewives are using more and more beet sugar. Retail dealers report that calls for western sugar is far in excess of calls for foreign sugar.

Tell your grocer to send "Utah-Idaho."

### UTAH IDAHO SUGAR

ABSOLUTELY PURE

The Utah-Idaho Sugar Company recommends attendance at the Annual Farm and Home Convention to be held at Logan, Utah, January 24 to February 5; Cedar City, Utah, February 9 to 19.

the mother's milk does not agree with an infant, modified milk is the next choice. Proprietary foods are not good owing to the amount of starch. They make fat babies but lacking in muscle and reserve force. A fat child is not necessarily a healthy one.

Never use cane sugar for an infant or young child. Use sugar of milk. Cane sugar ferments.

Feed regularly, in fact regular meals are best all the way along. If meals are delayed, let the children eat rather than go beyond their time.

Crossness with consequent upsetting of the digestive secretions and frequently over-eating owing to hunger, are the results.

Form regular habits in early years as to time, kind of food, and quantity, and there will be no trouble as the child grows older. Set the table for the needs of the child rather than for the likes of the adult.

Remember that though your child may have eaten with impunity certain articles of food while young, it may mean serious digestive troubles



in later years. We do not live entirely in the present.

#### Children From Two to Four Years of Age.

1. Children between two and four years should not be given the meat gravy that is made from the pan drippings, or milk gravy made with flour and fat. The fat is injurious and the starch imperfectly cooked. Bread and gravy, potatoes and gravy, are all hard for a child to digest. Introduce the pulp of vegetables early in the diet. Give orange juice on account of the mineral salts it contains. If this fruit cannot be obtained an apple fed by using a spoon to scoop out the juice and fine pulp may be substituted.

2. Cereals, especially oatmeal, are valuable provided they are well cooked. Do not add sugar. If you do not give the taste for sweetened cereal it will not be missed. Use butter and cream at this time sparingly.

3. Bread at this period should preferably be white and well baked. zweibach or twice cooked bread, and brown bread only if very well baked. The allowance of milk per day should be one quart. This is in addition to

other articles of food. The habit of drinking milk constantly with little or no other nourishment will prove injurious finally.

4. Eggs should be used cautiously. One lightly cooked now and then if it does not disagree.

5. Do not feed sugar in any form. Cane sugar ferments. Avoid making dishes sweet or coaxing children to eat things they do not want by adding sugar. Variety in diet at this age is not needed.

#### A Typical Menu for a Day's Meals for a Child Two to Four Years.

Breakfast 7:30 a. m. Oatmeal mush, milk (no sugar). If the child is only two, strain and add to milk. Stale bread, zweibach, juice of an orange.

Lunch, 11 a. m. 1 cup milk, slice of bread, 1 tsp. butter.

Dinner, 1 p. m. Boiled or baked potato, serve with a little milk. Boiled onions, mashed, bread and butter, baked apple, milk.

Supper, 5:30 p. m. Boiled rice,  $\frac{3}{4}$  cup milk, bread and butter.

#### Children From Fourteen to Eighteen Years.

1. Care in serving food, daintiness of appearance, variety, are all factors in diet at this age.

2. Watch the daily elimination of waste matters, avoid late hours, give plenty of open air exercise. Constipation is one of the most serious things and must be watched from babyhood up.

3. Starches, sugars, fats, but not too much meat. The same food may be used but form of cookery should be changed. Milk if not liked as a drink may be served in the form of custards, milk gelatins and puddings.

4. Liquids in addition to milk, cocoa, to be used sparingly owing to its over-stimulating properties. Chicory and cereal coffees but never coffee or tea. Green vegetables, tomatoes and fresh fruits are all essentials. Pie and plain cakes, especially sponge cake may be served at times, with good candy, the latter to be eaten just after meals but not in between meals.

#### Special Menu for Children Between Fourteen and Eighteen Years.

Breakfast. — Fruit, cereal, milk, bread and butter. If meat is used at breakfast it should not be given at dinner, once a day being sufficient.

Lunch.—Macaroni and cheese, or hot roast beef sandwich, or bean soup and crackers, cocoa or milk, bread and butter, baked custard, or rice pudding, or baked apple.

Dinner.—Meat or scalloped eggs, green vegetables cooked, fresh vegetable salad, bread and butter, ice cream, jelly roll or tapioca cream, milk or cereal coffee.

#### Children From Four to Eight Years.

Breakfast.—Oatmeal mush, top milk, stewed prunes, toast, milk to drink.

Dinner.—Pea soup, crackers, boiled onions, baked potato, molasses cookies.

Supper.—Milk toast, rice pudding with milk and sugar, milk to drink.

#### Substitutes or Additions.

For rolled oats: Rice, rolled wheat, hominy, germade, cornmeal.

For onions and peas: Strained dried beans; other carefully cooked vegetable; fresh lettuce.

For prunes: Fresh ripe apples, baked bananas; other mild fruits well cooked.

## 2-in-1 Washing Machine



### WASHES, RINSES AND WRINGS

The 2-IN-1 interchangeable lid is a new feature in the washing machine business. You can rinse the clothes with the same power with which you wash them. SAVES ONE-HALF THE TIME AND LABOR.

The 2-IN-2 wringer swings into four positions. The rollers have the forward and backward motion as well as the swinging. The whole operation is controlled by one lever.

The lid can be removed from the washing machine and placed on rinsing tub as shown in the right hand illustration above, and the clothes thoroughly rinsed by the washing dolly. This not only insures a good job of rinsing but REMOVES THE LAST BIT OF DRUDGERY FROM THE FAMILY WASHING. The simplest constructed machine on the market. Equipped for gasoline engine and electricity.

Write for catalogue.

Mailed Free.

S. E. SCHROEDER MFG. CO., Minier, Illinois

Make  
Sure

Look for the  
RED BALL

It's right there at the top of the boot—plain as day. When you see it you can feel absolutely sure of the quality. For the Red Ball is the trade mark of

"BALL BAND"

Eight and one-half million men wear "Ball-Band." More than 50,000 merchants sell it. You'll find the cost per day wear lowest in "Ball-Band." All "Ball-Band" boots are vacuum cured. During the vulcanizing process a tremendous pressure makes the entire boot one solid piece.

Something New — "Ball-Band" Light Weight Rubbers for street wear in Men's, Women's and Children's sizes. Ask your dealer. Look for the Red Ball on the sole.

Our free booklet "More Days Wear" is yours for the asking. In case your dealer can't supply you let us know.

Mishawaka Woolen Mfg. Co.

370 Water Street

Mishawaka, Ind.

"The House That Pays Millions for Quality"

## Crystal Purity

Sugar made at home is 100 per cent pure. It is cheaper than the foreign kind. Table and Preserving Sugar is suited for the table, for cooking, baking, canning, preserving, candy making and other purposes.

ASK FOR TABLE  
AND PRESERVING  
SUGAR.

## MOTHER WITH BABY

NEED SPECIAL

CARE

We specialize  
doing nothing but

## MATERNITY WORK

THE  
SALT LAKE  
MATERNITY HOSPITAL  
447 THIRD EAST

Miss Gertrude Tobiason, Superintendent.  
Graduate of the Battle Creek Sanitarium and hospital.

For rice pudding: Custards; rennet pudding; gelatin; other simple desserts.

For cookies: Sponge cake; very plain cookies.

#### Children from Eight to Twelve Years.

Same for breakfast and luncheon or supper as for four to eight years.

Dinner. — Roast beef, creamed potato, spinach, bread and butter, rice pudding with milk and sugar.

#### Substitutes or Additions:

For rolled oats: Other cereals thoroughly cooked.

For roast beef: Rare beefsteak, mutton chops.

For prunes: Any mild fruit uncooked or cooked.

For onions: String beans, stewed celery, beets, squash.

For spinach: Peas, turnips, cauliflower.

Russian bread, made by adding eggs, a little sugar, shortening, raisins, currants and nuts if desired, to common bread dough, is excellent for sandwiches.



# Taxing of Farm Machinery

Provo, Utah, January, 1916.

In a recent issue of your paper was an answer by Harden Bennion to three questions on the new tax law. The decision to assess machinery at its cost value so long as it is doing the work for which it was purchased is treated as a joke by a number of farmers to whom I have presented it. I think however, that we may not have the last word from the Board and I would like to get an opinion on the following: Is it not acting contrary to law to assess machinery at more than its value? (Some of the farmers are going to law, they say, if any such evaluation is attempted and I believe they will unless they can be convinced of the justice of the decision). It is claimed its value is what it will bring in the market and no more would the Board consider a machine doing its work when money had to be spent to keep it in repair? In fact the farmers test as to whether a mower is worth anything or not is the cost of repairs.

If an automobile five years ago cost One Thousand Dollars and a better machine of the same make can now be got for Seven Hundred could the ruling of the Board be consistently followed?

Is it not true that the ruling is discrimination against the farmer because of the great amount of machinery he is compelled to have.

These are some of the thoughts expressed by the farmer about the matter and we would appreciate very much a discussion of these matters.

Yours respectfully,

RAYMOND PARTRIDGE.

Roosevelt, Utah, Jan. 25, 1916.

Utah Farmer:

Lehi, Utah.

Dear Sir:—Your favor of the 19th enclosing copy of a letter from Mr. Raymond Partridge of Provo discussing a former letter of mine published in your valuable paper, was forwarded to me here from Salt Lake City, which I trust will be sufficient excuse and explanation for my delay in answering, which I regret.

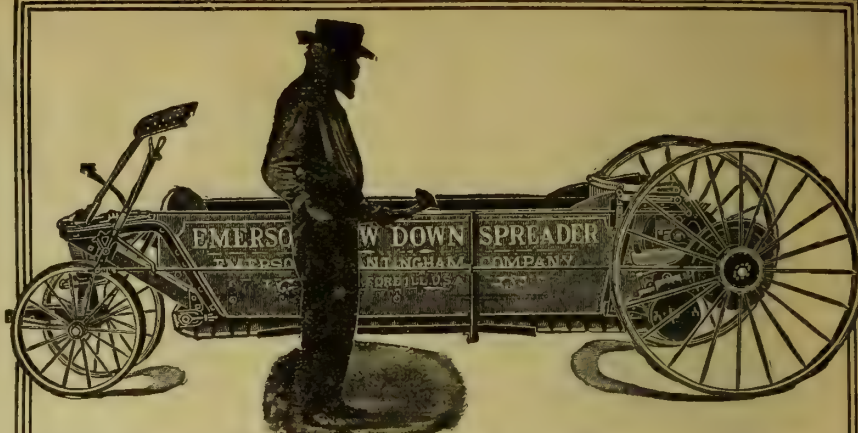
Before attempting to answer the questions propounded by Mr. Partridge I wish to thank him for his consideration and courtesy in having suspended judgment in the matter until he could hear further from the Board, also to say that my former letter, as also what I shall say now, are rather on my own responsibility as a member of the Board, and that I should have preferred very much to have submitted his letter to my fellow members and to have based my reply upon their united judgment. However, inasmuch as I shall not be at the office for several days, and this question being so much in the public mind right now, I deem it best to make such answer as my own limited and very fallible judgment will dictate on the spur of the moment, especially in view of the fact that what I shall have to say will harmonize, I take it, with the view of your correspondent, at least partially so.

In the first place, let me say that the State Board of Equalization has made no "ruling" or "decision" that machinery should be assessed continually at its cost price regardless of its present value. If my letter carried that impression I desire to

correct it forthwith. If I remember rightly, and I speak now only from memory, my remark that has brought about this discussion was in answer to the question as to what amount of depreciation should be allowed annually upon machinery, and I answered that the practice of the Board was to consider, in the assessment of the machinery that it is by law required to assess, that so long as a piece of machinery was doing the work for which it was installed it was worth its cost. This of course was only a general rule, and was subject to such variation as circumstances and conditions might make necessary. The thought I had in mind was to depreciate the idea of either taxpayers or officials having in mind or fixing a definite rate or percent of depreciation regardless of the actual depreciation that had taken place, which may be very great or very small, depending upon the character of the machinery, the use to which it is put, & c. The machinery assessed by the State Board of Equalization consists entirely of expensive and intricate mining and electrical machinery, locomotive engines & c, the actual depreciation of which only experts of the highest order could determine. In addition, part of it at least is sometimes taken into a shop and rebuilt so that it becomes practically as good as new, so that to allow a given rate of depreciation upon all machinery, regardless of conditions, would be out of the question. In view the further fact that in the past all the property of the state has been assessed at only a fractional part of its value (which fractional amount no man could or had the right, to fix) we have felt that an assessment considerably below full value while the machinery was new justified a higher valuation than would otherwise be equitable when the machinery was nearing the end of its period of usefulness.

And I want to ask Mr. Partridge, or others who have been longer in this field than he has, if it is not a fact that such has been almost the universal practice? Has not a mowing machine, whether new or old, and assessed at about a uniform value? Has not that been true of automobiles and Fords? My own experience justifies such assumption; and when I say my experience I mean my examination of assessment rolls.

Certainly it would be contrary to law to assess machinery at more than its value, and certainly it would be contrary to law to assess an automobile that cost a thousand dollars five years ago at that value when a new one of the same make could be bought for seven hundred dollars today; but such practice would not be more contrary to law than to assess property, of any kind, at one half or one fourth of its value, as has so persistently been done in the past. And in saying this I am not wishing to place the blame for the conditions that have obtained upon country officials, or anyone else for that matter. The only thing I want to say, and the only thing that the state Board of Equalization is aiming at, is to secure the assessment of property at its full and fair cash value, and that, not for the purpose of securing or collecting more taxes, but only as a better and more



## Makes It Twice As Easy—The EMERSON Low Down Spreader

NOW you need no longer waste energy lifting manure into the old-fashioned spreader with a box as high as a wagon. Just why the world has been content to waste all this energy all these years no one knows, but you don't have to do it any longer. The EMERSON Low Down Spreader reduces the work at least 50 per cent—there is no lost motion. Loading from either side or rear, you lift your forkfuls only a little over half as high as with the old-fashioned spreader—and it's the last half that takes the most muscle.

Point by point, feature by feature, the EMERSON is as far ahead of other spreaders as the low down principle is ahead of the old style. Let us prove it to you. Send your name for our new booklet of facts. Read why the EMERSON Low Down is

### Easy to Operate, Easy to Load, Easy to Unload, Easy Running

Beater is all metal, can't warp, split, rot or check. Teeth are square steel, chisel pointed, set in spiral form—so they cut, tear, shred and pulverize all the manure and spread it evenly regardless of how bed is loaded.

Endless apron—each slat runs on its own wheel—not dragged over stationary rollers. Worm gear drive runs in bath of oil. Foot lever controls driving mechanism—hand lever changes quantity spread.

Main drive wheels 50 inches high—main frame sills are steel channels 3 inches wide, 5 pounds to the foot. The EMERSON Low Down is practically an all steel spreader—the only parts not steel are—apron slats, box sides, pole and whippetrees.

You should know more about the EMERSON before you select any spreader. Call at our store and we will be pleased to show it to you.

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MILLER-CAHOON COMPANY

Murray, Utah.

Idaho Falls, Idaho.

## Free Seed and Nursery Book Now Ready

This book is brimful of just the information needed by every planter of seeds, plants, roses, and trees. It contains 112 pages, fully illustrated, describing in detail the best varieties adapted to Western conditions.

SEED TIME IS HERE

Write today for free copy.

PORTER-WALTON COMPANY

SALT LAKE CITY, UTAH.

equitable, and lawful, assessment of the property of the state.

And now, if I have answered your correspondents questions, and if I haven't I shall be glad to make another effort; at the risk of saying too much, I want to say just a few words on the question of full value, what it means. A very estimable gentleman, one well known from one end of the state to the other, said to me a few days ago that no man could determine what was meant by full value, that the suit which he wore, even though he had never worn it, although it cost him thirty-five dollars, was not worth more than five dollars after it was

**AGENTS!**

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Absolutely safe. More brilliant and many times cheaper than gas or electricity. Guaranteed to last a year. Everyone a possible customer. Send for free illustrated catalog. Large commissions. Exclusive territories free.

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made up, for the reason that it would not fit any other man and therefore could not be sold for more than five dollars. The fallacy of such reasoning, at least as applied to taxation matters, is so plain that I need no comment. I only want to say that full value, for taxation purposes and as defined by law, and as construed by the courts in hundreds of cases, is not the price that any particular article might bring when sold at forced or unusual sale, but the price or value at which other like articles, and of the same class and value, sell in the ordinary course of business.

In conclusion, and answering the last remark made by Mr. Partridge, let me say that for myself, and I know I speak for every member of the Board in this particular, in so far as we have any jurisdiction in the premises, I want no "ruling" or "decision" or "practice," not even any letter, to be so construed or interpreted as meaning a discrimination against farmers, or any other class of citizens. No matter what is said, or may have been said, let it be understood once for all, that whether taxes shall be high or low (and the State Board of Equalization has little or nothing to do with that matter, the popular supposition to the contrary

HOW WE PRODUCE OUR SEED POTATOES

We, like other seed houses, have had considerable trouble to find suitable seed potatoes, stock we could recommend free from disease and which would be of special merit as to reproducing itself and we made up our minds to offer our customers stock that was free from disease, true to type, color and size.

The Government has established a station for the production of pure, clean and suitable seed potatoes at Jerome, Idaho. A visit to the station convinced us that they had some clean stock which we wanted and we bought what they could spare, planted them on new sage-brush ground, watering them once, dried them up the latter part of July and harvested them the middle of October and got a yield of 40 bags per acre, none larger than hen eggs. Now we have a stock as firm as rocks, perfect in type and absolutely free from disease. We planted 45 acres of this seed stock on old alfalfa ground and produced 260 bags per acre. We also selected three varieties and sent them to the National Potato Show at Michigan and were awarded the first prize on each.

If you want potatoes of special merit, potatoes that will make you money, write us.

VOGELER SEED CO.  
Salt Lake City, Utah.

notwithstanding) the first and most important consideration of all is that the burden shall be distributed equitably as between taxpayers, and that there shall be no discrimination.

Very respectfully,  
Harden Bennion.

METHOD EMPLOYED FOR RAISING CALVES.

From Bulletin of the Wisconsin Agricultural Experiment Station.

The method employed in raising dairy cows in a University Dairy Barn during the past four years has been satisfactory. It may not coincide with the equally successful methods employed with other dairymen, but it is one which can be recommended.

It is aimed to give the cows of the herd the best care as regards feed, shelter, and handling. Six weeks prior to calving cows are carefully dried off in order to give them a rest from producing milk, which is to be recommended in all cases. During this time the grain ration is continued by feeding two to four pounds of oats and bran, or 2 pounds of bran and 1 pound of oil meal, the amount depending upon the condition of the cow. It has been observed that this practice gives strength and vigor to the cow and to the calf which she produces. The first two to four days the calf is allowed to run with the cow, after which it receives 3 to 5 pounds of its own mother's milk three times a day until four weeks old. In some instances, if the young calf is small and inclined to be weak, a smaller amount at a feed four times a day is fed. After the calf is 10 days or two weeks old it usually noses about and will pick up hay or grain. It will sometimes pick up coarse butts of fodder or silage corn cobs and swallow them, which is very sure to bring on a case of indigestion and sometimes serious difficulty. One should be careful to see that in the feed or bedding there is nothing of this character to cause the difficulty.

During the fifth week the milk is gradually changed to skim milk. The amount is not increased until about the eighth week, when the calf can be fed eight pounds twice a day. A small amount of grain and dried clover or alfalfa is placed before the calf after it is ten days to two weeks old; the grain is fed immediately after calf has taken the milk. The feeding pails, stable and calves are kept as clean as possible and plenty of pure air is provided. The calves are kept on a cement floor over which are laid boards to keep calves off cold cement. The stable should be kept warm.

A small amount of corn silage is fed after the calf is a month or six weeks old. During the first summer the calves are fed regularly in the barn and turned out for exercise in shady paddocks or during nights only.

Up to 24 or 30 months of age, the time the heifer drops her first calf, she does not receive more than 3 pounds of grain per day. From the time she commences to eat grain as a calf, she is fed as much as she will relish up to this amount, which, with skim milk up to the age of six, eight or 12 months of age, depending upon the supply of skim milk, corn silage or hay, is sufficient to produce a very satisfactory growth. Our grain mixture for calves consists of a mixture of five parts whole oats, three parts wheat bran, one part corn meal, and one part oil meal. Water and salt are supplied daily as the calf wants it.



HEWLETT'S LUNETA BAKING POWDER

- enters the home on its reputation.
- remains there on its merits.
- it is the most efficient, purest and best baking powder on the market at 25c the pound.

UTAH MADE— AT YOUR GROCERS

RELIABLE SEEDS

For fifty-one years Bailey and Sons Co. have stood behind their enviable reputation justly earned by absolutely fair dealing. In no line of business perhaps is the reliability of the merchant depended on so much as in the seed business. Without good seeds all the efforts of the most careful and intensive cultivation are wasted—the only way to be certain of good foundations for your crop is to buy seeds from a RELIABLE dealer.

Start right by securing your complete line of seeds from the oldest seed firm in the Inter-Mountain West. It will pay you. Write today for catalogue, also ask for our new Poultry Supply Catalogue.

BAILEY & SONS CO. SEEDSMEN Est. 1865 SALT LAKE CITY, UTAH



THE HOWE WEEDER

with the same horse power is guaranteed to do two times more work and do it better than any other machine now used for cutting out weeds and summer fallowing dry farm land. Dry farmers cannot afford to be without these machines a single season. Order early as we cannot promise prompt delivery on late orders.

Best of reference.  
DAVIS, HOWE & CO.  
Salt Lake City, Utah

DAVIS HOWE & COMPANY, Salt Lake City, Utah, September 27th, 1915.  
GENTLEMEN:—After using your Howe Weeder and Summer Fallow machine sixty days, we are pleased to say it has saved us at least \$150.00 already in our weeding work. It does double the work we were doing before with one man and five horses, and does it better. It is by far the most successful machine for cutting out weeds and doing summer fallow work we have ever used, and we take great pleasure in recommending this machine to dry farmers as the best tool for this work we have ever seen.  
Very truly yours,  
J. W. GRACE,  
Mgr. Fort Harriman Land and Live Stock Co.  
Riverton, Utah  
R. F. D. No. 1.

**CALKO DIP**  
An insecticide and disinfectant for  
**Cattle, Sheep, Hogs, Horses and Poultry**  
45c qt., 75c half gal., \$1.25 gal., delivered.  
**CALKO**  
Stock Conditioner  
Keeps stock healthy and thriving.

CALKO HEALING POWDER heals saddle and collar galls, barb wire cuts, etc. Keeps flies flying.  
Send in your order.  
CALLISTER-KORTH CO.  
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## POULTRY

### PROVIDING GREEN FOOD DURING THE WINTER MONTHS.

By Edwin Brickert.

The hen expected to lay during the cold months, must have some kind of green food along with her grain and meat food. Beef scraps, green cut bone, blood meal or chopped raw beef, will take the place of the bugs and worms they pick up during the summer, but something must also be provided to take the place of the tender blades of grass picked here and there. Grains in them selves are too concentrated to form the whole diet for domesticated fowls. With a crop filled with nothing but grains, the starch in them becomes pasty and sticky after becoming moist and will not move along easily through the fowls peculiarly formed alimentary canal unless there is some bulky substance mixed with the food. If too much meat food is fed to force egg production, the fowl becomes protein poisoned. In fact, it requires much less food if bulky green foods of some kind are fed regularly, and, of course they are much cheaper.

At first thought it would seem almost impossible to have a supply of green food during the winter even in our mild Utah without considerable cost. Yet there are several different ways of supplying this part of the rations. Apple parings, cabbage and lettuce leaves, which would otherwise be wasted in the kitchen, can be chopped up with a vegetable cutter into

pieces small enough for the fowls to eat, and they form an excellent substitute for the grasses of summer. Heads of cabbage may be hung up in the scratching shed, so the fowls will be required to jump up for them. This also provides exercise. Care should be taken, though, not to feed the hens too much cabbage as it will give the eggs a peculiar flavor.

Cabbage, turnips and beets or any other vegetables may also be fed in a bag made of old fish netting hung up in the poultry house. The cow beet or mangel-wurzel, forms a very cheap and efficient green food for poultry, but these are usually hard to find on the open market. If you want a supply of these for next winter sow a small patch of seed in rows, so they can be tended along in July or engage some farmer to grow them for you. You will get more green food per square foot for your fowls than with any other vegetable or plant I know of, and they are greatly relished by the fowls. These beets grow commonly, in good soil, as large as your hat, if thinned out properly, cultivated and a good supply of water provided.

If you live in the suburbs of a city possibly there is a hot house near which grows lettuce during the winter. There are many waste leaves and they may be obtained at small cost. In the last few years, alfalfa has been placed on the market in the form of a dry, bulky meal for poultry. A quantity of meal is scalded with hot water before

it is intended for use. It turns as green as grass as soon as it is scalded but it should be left covered tightly for several hours to swell up to its normal size. It should there be mixed with mash food, so that it will form about one-fourth of the quantity in bulk. Here in Utah where alfalfa is so good, so plentiful and so cheap, it can be ground or cut fine and used as a substitute for the above mentioned commercial meal. Pure, clean, clover or alfalfa leaves is equally good chopped up and scalded, and fed in the same manner as the meal, or a bale of clover or alfalfa may be left in a corner of the scratching shed for the fowls, when it will soon be found that the leaves will all be picked from the stems; then the bale may be torn apart, and they will eat every leaf from the stems. It will surprise some to think of fowls eating hay, but they will actually eat all of the leaves of the clover or alfalfa stems so much do they relish green food.

Lawn clippings gathered with a grass catcher fastened to the lawn mower and dried and soaked in the winter and fed as needed is another

cheap green food which can be used to advantage.

Sprouted oats make another good form of green food for winter use, or for the whole year for that matter. Where the birds are kept in close confinement. The grain is soaked in lukewarm water overnight and then placed in a shallow box or pan in a two inch layer and the pans kept in a comparatively warm place for ten days or until the young plants reach a height of an inch. Several pans should be used so that the fowls will have green food every other day or less frequent than three times a week.

It is necessary, of course, to have a sprouting box to be used to hold the pans of grain. The box may be made any size that is convenient. The pans may be purchased in a five or ten cent store for five or ten cents each. Then the box may be made to fit the pans. Make the box 36 inches long by 13 inches wide and 4 inches deep. The pans are 5x7 inches and 4 inches deep. This sprouting box is made flat that it may be hung up by

(Continued on page 15)

## Ask Me About Salt Lake County

I am representative for the Inter-Mountain Rural Credit Association for Salt Lake County. Will gladly call on you to explain any details. Write or telephone me and I will come and see you.

P. T. MOYES.

465 South 3rd East, Salt Lake City, Utah. Phone Was. 7370-W

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SALT LAKE CITY, UTAH.

Without obligating me in any way please send me your sixteen-page booklet which explains in detail the plan of The Inter-Mountain Rural Credit Association and tells how I can become a member and enjoy the benefits of this co-operative organization of Utah and Idaho.

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65 acres in Utah county with water right will make first-class beet and alfalfa land, a bargain at \$120.00 per acre, small cash payment, no other payment required for five years.

640 acres, some hay land, water right. Can grow at least 80 bushels oats per acre, fine for hay, grain and stock. A bargain at \$15.00 per acre, small cash payment, or might take city property at cash value.

860-acre improved ranch, independent water right, one mile from town and railroad, nice herd of cattle, horses, hogs, lot of implements, hay 5000 bushels oats go with place. First-class free range. Cheap at \$35,000.00. Terms or would take city property at cash value.

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Agents \$50 weekly. Sell our 15 house-hold inventions. New, live quick sellers. General agents getting rich. Every home buys one or more. Samples furnished active workers. Write now, Oregon Sales Co., Box 1158, Portland Oregon.

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Some Jubilee Incubators as good as new, holding 500 eggs. Also two successful machines holding 320 eggs each.

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## Holsteins For Sale

Cherry Creek Dairy Farm offers Registered Cows, Bulls and Heifers. Sons and daughters of Rag Apple Korndyke 13th. Grand champion Utah State Fair 1915. Sire Rag Apple Korndyke. Dam, Fairview. Mabel Korndyke A. R. O. record 25.51 pounds butter in seven days fat 4.83 per cent as a Jr. three years old. We offer 10 choice heifers age 2 months to one year for \$1000.00. A bargain for some one. Bulls from \$75.00 to \$150.00. Including a choice Bull calf 5 months old from Lady Netherland, 1st prize. Also 1st in milk and butter fat contest Cache County and Utah State Fair.

**NELSON BROS. Props.**

Richmond

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## FLOWER GARDENS AND

## FORESTS UNDER THE SEA.

May be seen from the glass bottom boat in the harbor of Avalon, Santa Catalina Island. One of the interesting personally conducted side trips in connection with the Salt Lake Route big Mid-Winter Excursion on January 29th, \$35.00 to Los Angeles and return, on that date only. Special trains with standard and Tourist sleeping cars, Dining and Observation cars start from Salt Lake City. Make your reservations early. Further particulars concerning side trips, routes, etc., may be had from any Salt Lake Route Agent or by addressing, J. H. Manderfield A. G. P. A. 10 E. 3rd South St., Salt Lake City, Utah.

## PROVIDING GREEN FOOD DURING THE WINTER TIME.

(Continued from page 14)

wires near or directly above the furnace in the basement of any home and the box is up out of the way and where the temperature is 70 to 90 degrees most of the time. The box may also be placed in a warm window in the basement. After the oats is soaked overnight in water, the water is drained off in the water, and one of these pans one-third filled with the soaked grain. Everyday after this, then, soak enough grain to place in another pan. Thus with ten pans you will have sprouts about every day in the week for one pen or every other day for two pens. The temperature at which the sprouts are kept will have much to do with the frequency of the rotation. The sprouts are sprinkled once a day, care being taken that they are kept reasonably moist. A damp cloth may be kept over them for two or three days with good results.

The sprouting grains from a bulky mass of tender roots and sprouts and grains and the fowls greedily eat the last particle. With oats at \$1.25 per cwt. in Utah this winter sprouted oats make a very cheap and green food.

If it is desired to sprout the oats in some room of the house where space is at a premium an ordinary coffee box 3 or 4 feet high and 18 inches wide and 12 inches deep may be fitted with shelves and a door and set on end, and legs placed on it so that a small No. 1 lamp may be set on the floor under the box with a large hole in the bottom of the box and space back and front of the shelves so that warm air will circulate, and holes in the top of the box for the fumes to escape, this making a very satisfactory home made sprouting box. The lamp should be turned very low and even then in a warm room the flame will hardly be necessary only on cold days. By all means do not enclose the lamp in the box, though, as it will not get enough air to cause proper combustion and it will smoke and cause trouble.

In counting the money out-lay for farm help, don't forget the wife. She works harder than any of you and gets the least for it.



## HANDLING FRUITS FOR DISTANT MARKETS.

The fruit growers of the Willamette Valley Oregon and the U. S. Department of Agriculture have been conducting some experiments in regard to the importance of careful picking and handling in preventing decay in such fruits as cherries and prunes, when sent to distant markets.

Hitherto it has not usually been found profitable to ship fresh cherries and prunes from this region to distant markets because of the unsatisfactory condition in which the products arrive. These investigations demonstrate that a great part of the decay can be prevented by the exercise of proper care, but that unless care is exercised there is little hope of disposing of the fresh cherry and prune crop of this region in distant markets. The facts brought out in the investigation are believed to be applicable also to other sections of the country.

The losses which shippers of cherries and prunes experience are due chiefly to brown rot and to other fungi which gain entrance through abrasions in the skin, or other injuries to the fruit. The brown rot must be controlled by proper orchard practice. On the other hand, the loss from those forms of fungi which do not attack healthy, sound fruit can be minimized by careful handling.

In order to demonstrate this fact the investigators stored various lots of carefully handled fruit and of commercially handled fruit for varying periods in a refrigerator car, in which the conditions were made as nearly as possible identical with those under which the fruit would travel in actual commercial practice. At the end of 5 days in the iced car, the carefully handled fruit showed an average of only 0.5 per cent of decay, while the commercially handled fruit showed 2.8 per cent of decay, or practically 6 times the amount. At the end of 10 days the carefully handled fruit had 1.5 per cent of decay, and the commercially handled lots 12.3 per cent, or 8 times as much. Ten days is approximately the time required to ship fruit from the Willamette Valley to Chicago.

Similar results were obtained from experiments with prunes, although with them the percentage of decay for both commercially handled and carefully handled fruit was smaller than with cherries. It is pointed out, however, that although every effort was made to have the conditions approximate those in actual transportation, it is probable that the fruit kept better in the iced car used for these tests than it would in the ordinary refrigerator car in transit.

Experiments were also conducted both with carefully handled and commercially handled fruit to determine the value of pre-cooling before placing the fruit in the refrigerator car. These tests show that pre-cooling is undoubtedly of value. On the other hand, it can not be relied upon to prevent losses due to careless handling. Injured fruit will decay whether it is pre-cooled or not, and for this reason pre-cooling is not recommended unless it is preceded by adequate care in picking and packing.

It is also pointed out that any delay between the picking and the shipping of fruit hastens decay. The amount of damage done in this way will vary, of course, with the weather conditions,

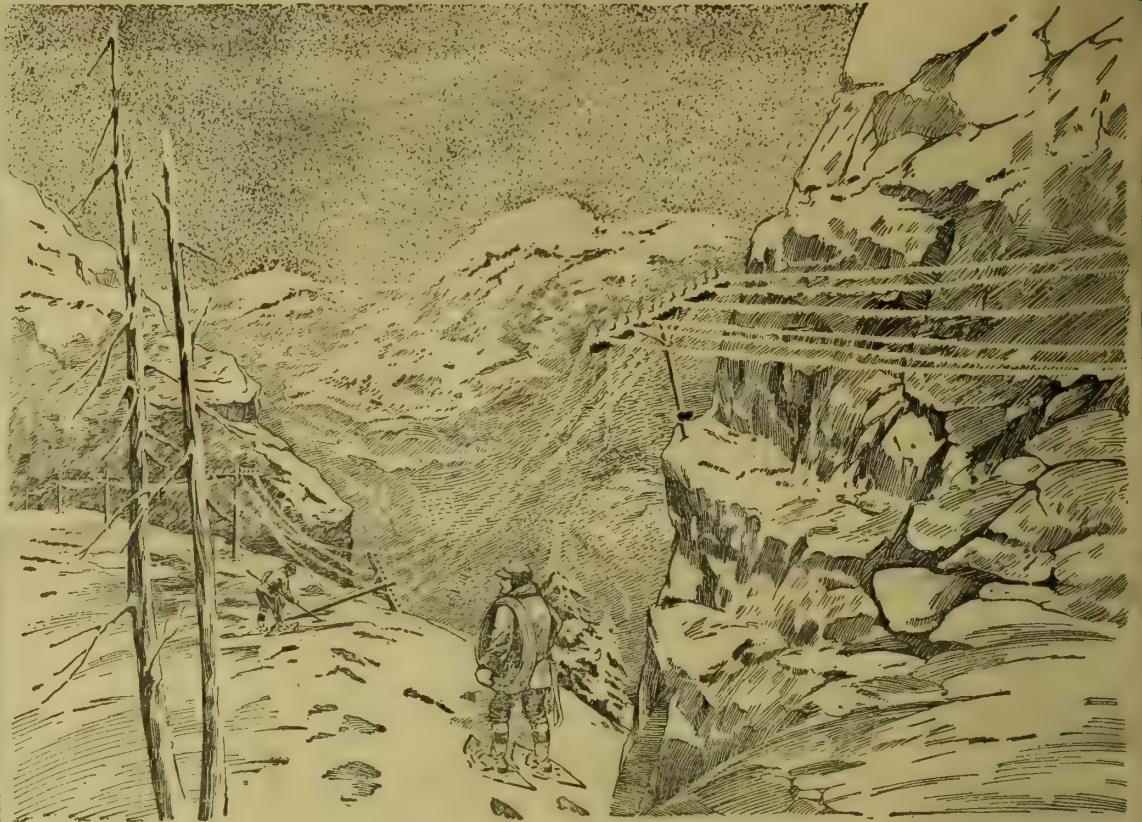
but under any circumstances it is considerable.

In view of these facts it is recommended that every precaution should be taken in picking the fruit not to bruise it, and that it should be transferred as few times as possible from one container into another. While it is being held in the orchard after picking it should be kept in the shade and

the hauling wagon should be provided with good springs and covered with canvas in order to keep off sun and dirt. In grading, all damaged fruit should be culled out, and as soon as the shipment has been packed it should be placed in the refrigerator car.

The extra expense of careful handling, it is said, will be more than off-

set by the reduction of losses from decay and the ability of the fruit to maintain itself in good condition while exposed for sale. If these suggestions are adopted generally by fruit growers and in consequence a large proportion of the crop marketed fresh, it is believed that the industry will benefit greatly and its extension will be made profitable.



## Maintenance Problems

Interruption in Long Distance service means annoyance and loss of time to our patrons.

Intense heat, extreme cold, lightning, wind, sleet and snow are relentless enemies of "outside" telephone plant.

The elements are continually warring against our poles and wires.

Often an attack results in only the breaking of a single wire; occasionally the result is miles of broken poles and tangled wires.

Sometimes the trouble is near headquarters; often it is far up on the wind-swept mountains.

Wherever and whatever it is, our repairmen, bravely defying the elements, hurry to the scene to make the needed repairs.

Many a wreck caused by winter storms costs thousands of dollars to repair, and has caused our repairmen to suffer hardships almost unendurable.

But the lines must be kept open. Telephone service must be as nearly continuous as it is humanly possible to make it.

The maintaining of a telephone plant in this mountainous country is a problem rarely considered by telephone users.

## The Mountain States Telephone and Telegraph Co.



# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region

OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE

VOLUME XII; No. 28

LEHI AND SALT LAKE CITY, UTAH

FEBRUARY 12, 1916



Can you imagine of a more beautiful picture than this one? The snow capped mountain—homes nestled among the trees—fields and farms nearby.

With slight changes this same picture could be reproduced in many parts of our fair state.



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amounts to

## Millions of Dollars

This was the value of the products raised on Utah's farms last year.

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This friendship has proven profitable.

It pays good dividends.

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We are sending out several hundred letters this week to our friends asking them to renew.

Send your check today.

Every Saturday we promise to send you a message from the greatest experts on agriculture in the Rocky Mountain region.

Nuf said.

Send all mail to the Utah Farmer, Lehi, Utah.



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VOLUME XII.

LEHI, UTAH, SATURDAY, FEBRUARY 12, 1916

No. 28

## Saving On a Farm

Talk given by Gov. J. C. Cutler at Farmers' Round-Up, Logan, Utah.

I have been asked to talk on the subject of "Saving on a Farm." I have not been informed whether I am to talk about saving on a dry farm or a wet farm.

You may wonder why I have been asked to talk on Saving on a Farm, when it is known that my work has been along other lines, so you will perhaps forgive me if I give a little personal history. When my father and family came from England 50 years since, we purchased a small farm in Salt Lake County and took up some sage brush land adjoining, and I well remember my brother and myself plowing it, with two yoke of oxen we had driven over the plains. The furrows were as straight as the old fashioned snake fence but the potatoes were as large and as good as I ever remember eating. I also remember wearing English flannel shirts while helping the threshers with our crop of bearded wheat, and the agony I was in when that bearded wheat commenced to climb up my sleeves and down my back. So you see I consider my farming experience gave me some right to talk to farmers.

Saving on a farm, or making it pay so that at the end of the year all the expenses have been paid from the products of the farm, and there is something left in the bank, is only one of many things to be considered, and one of the most important, if not the most important, is the life and health of the farmer, his wife, his children his help, and all the stock on the farm. Therefore before a farmer commences to save money he should see that all the members of his family are comfortably provided for that his stock is properly fed and cared for.

One of the important things on a farm is to save labor for yourself, your wife, your children and your help. I know a dairyman who had his coal unloaded in his barn, and had to carry every coal scuttle of coal about 20 rods, from his barn to his house. I never learned why he did not build a coal house close to his house as he had no cellar. A woman told me that she and her son lived on a farm in Idaho and she carried all the water they used, from a stream over a block away when at a little expense it could have been piped to the house. I was in a county town and saw two children filling a barrel with water from a ditch that had flowed some blocks close to corrals, and was told the water was used for culinary purposes. Most of the families in that town obtained their drinking water from ditches that stock contaminated, and an epidemic

of typhoid was traced to impure water supply. These are only two or three illustrations to show how both health time and money were wasted.

Save time money and crops by not watering more than the crops need, find out just how much they do need.

Potatoes only need about 8 inches of water during the season.

Barley and oats need about 15 inches to the acre.

A 4 ton crop of alfalfa about 16 inches of water to the acre.

Much time and labor is lost by over irrigation.

Ours being a new country and subject to so many financial changes, those who buy farms on credit cannot buy on as favorable terms, as in old settled countries where farmers and their children follow the same occupation for centuries.

Among farmers in Europe it has been a custom for at least a century in purchasing land to make a small cash payment and give a mortgage for the balance due, this mortgage to bear interest and the farmer agreeing to pay in addition to the annual interest a certain increased percentage which will at the expiration of a given number of years amortize his debt. To

(Continued on page 9)

## Know Yourself and the Service You Can Do For Others

An Address by Walter R. Siders, Supt. Public Schools, Pocatello, Idaho.  
Given at the Farmers' Round-Up, Logan, Utah.

The 50,000,000 men, women, and children living either in the open country, or in rural villages and small towns are entitled to have the best the nation affords in the way of wholesome and profitable living. Everything in the nation should combine to bring to these fifty million people "all that is sweetest and sanest and strongest and best in human culture." All the different agencies in the nation, in the state, and in the local community must needs be brought to bear upon this problem. The most vital agency of all must be the rural school, and the rural community center developed around it.

The school of today has been termed a "citizenship-factory," an institution to take raw materials—boys and girls and to turn out the finished product—good citizens; citizens enlightened, moral, refined, unselfish, patriotic, self-controlled, and above all efficient. Efficient in caring for themselves, and those dependent upon them, and efficient in their citizenship.

We urge young people to secure an

education that they may be successful. What is success? Is success measured in wealth, in fame, or in what?

Power and wealth have been considered the measures of success, but are they?

Who is most successful? He who creates the greatest influence for good. The truly great men are those whose deeds and whose thought have influenced the generations following them. Men and women whose lives are an inspiration to live better, and to do more nobly.

Great thoughts, good music, fine art, magnificent architecture, etc., are permanent and lasting influences.

Great moral leaders, and great moral teachers leave a greater impress than any conquering hero; a more lasting and permanent influence than any man who is the mere accumulator of wealth. I condemn not the possessors of wealth or of power but the wrong use that is made of wealth and power.

I would put a new ideal before our young people, the ideal of service. They should be taught that service is the highest success. They should be taught the meaning of "He that would be greatest among you, let him be the servant of all." They should learn to consider power and wealth as means to an end, and not as ends themselves. They should further learn that even these are not indispensable for service, a perfect service resulting from the sacrifice of the individual to a great work.

Young people should learn how they can develop the powers that lie within them. They should learn to make themselves of so much worth to the world that livelihood will come to them as incidental to the service which they render to humanity.

The Course of Study (Arithmetic, Grammar, History, etc.) is the letter of the school, but unless the spirit of true citizenship is emphasized, unless instruction develops the spirit of exalted manhood and noble womanhood, the school is a failure. It fails to realize the reasons for which the state maintains its schools.

I believe that there are three things which sincerely taught by the schools and faithfully learned by the young will make them successful in the highest sense of the word. These three things are: (1) To know themselves; (2) To be themselves; and (3) To give themselves to the service of others.

(Continued on page 6)



A good granary indestructible and mouse proof. Built of concrete with silo forms. 16 feet inside diameter, about 12 feet high.

### A GOOD GRANARY

By Ben R. Eldredge.

The accompanying cut shows the granary on the farm of W. C. Winder, Salt Lake County. Mr. Winder was one of the pioneers of the silo movement in Salt Lake Valley. In building his silo, he used a set of forms made in a boiler shop. These forms were durable and, after a number of silos had been built, he used the forms in constructing his granary, 16 feet in diameter and about 12 feet in height, with cement floor. It is indestructible and mouse-proof. The door is covered with galvanized iron. A window on the side opposite the door does not shown in the cut. It is a splendid part of the building equipment of the farm and built entirely by Mr. Winder and his sons.



## DAIRYING

### NORTHWEST DAIRY

#### PRODUCTS SHOW

Davenport Hotel, Spokane, Washington, February 24, 25 and 26, 1916.

#### Program.

Thursday, February 24th, 9:00 a. m.  
Professor E. V. Ellington, Chairman.  
Address of Welcome—Mayor of Spokane.

Response—Professor A. B. Nystrom, Pullman, Washington.

Controlling composition and color in buttermaking.—D. J. Davis, Buttermaker, Sandpoint, Idaho.

#### Discussion.

Pasteurization and the use of starters.—Thomas Wright, Jr., Dairy Instructor, W. S. C.

Afternoon, 1:30 O'clock.

Buttermakers' Butter Judging Contest.

Friday, February 25th, 9:00 a. m.  
Students' Butter Judging Contest.  
Buttermakers' Program, R. I. Burton, Chairman.

Solving the ranch butter problem.—W. H. Blunt, Caldwell, Idaho.

#### Discussion.

Quality as a factor in the sale of butter.—George C. Larson, Salt Lake City, Utah.

General discussion on butter marketing.—C. W. Sly, Oregon; W. E. Turner, Washington; J. R. Brown, Idaho; C. J. Oviatt, Wyoming; J. G. Howe, Montana.

Afternoon, 1:30 O'clock.

W. H. Blunt, Chairman.

The buttermaker's part in improvement of the cream supply.—J. G. Howe, Buttermaker and Manager, Stevensville, Mont.

#### Discussion.

Some problems in developing a co-operative creamery, H. H. Highfield, Stites, Idaho.

#### Discussion.

Marketing the output of the local creamery.—R. I. Burton, Ogden, Utah.  
6:30 p. m.—Dairy Banquet, E. E. Faville, Spokane, Washington, Toastmaster.

Saturday, February 26th, 9:00 a. m.

George B. Caine, Chairman.

Salt Test Demonstration—Thomas H. Wright, Jr.

Color Test Demonstration.—O. G. Simpson.

Casein Test Demonstration.—G. L. Martin.

Moisture Test Demonstration.—O. W. Holmes.

Value of butter scoring contests.—G. E. Frevert.

Afternoon, 1:30 O'clock.

E. F. Burton, Chairman.

Some essentials in marketing dairy products—Roy C. Potts, Office of Markets, U. S. Department of Agriculture.

The dairy inspector's part in raising the standard of dairy products.—R. McCann, Fort Collins, Colo.

Raising the quality of butter manufactured at co-operative creameries.—John Sollie, California.

Official Judges: G. E. Frevert, Western Office, Dairy Division, Salt Lake City, Utah.

Professor L. M. Davis, University of California, Davis, California.

Utah Farmer: Moroni, Utah.

Gentlemen:—Can you tell me if beet tops can be put in a Silo and if so can they be put in without being cut with a Silage cutter?

Thank you for the information. Every farmer should have your paper.

Respectfully,

James Draper.

Answered by Ben R. Eldredge.

Beet tops might be put in a Silo and would make a form of Silage. It would be a heavy watery Silage however, that would be very nasty to handle and contain a low feeding value compared to the corn Silage. I believe even to get the best results with beet tops as Silage they should be put through the cutter. In a general way the best place for beet tops is on the field for fertilizer and if it is necessary to use any for feeding let the stock pick the tops over in the fields.

If one had some corn he was going to put in the Silo and the corn had lost some of its moisture or had become frosted and was a little dry then I think some beet tops that were fresh and in good condition might be fed into the cutter along with the corn and possibly a better Silage might be made by using the beet tops.

Clean milk is obtained only by a clean dairyman.

Only green feeds contain the carotin that makes butter yellow.

"Raise your heifer calves" is the slogan.

Raise calves on clean, warm, sweet, skim milk, fed regularly.

Do your cows pay? The scales and Babcock test should be used to answer this question.

Provide light and ventilation. Use plenty of bedding for absorbent.

#### CHOICE CANADA PEAS.

I have about one and one half tons of choice Canada Peas grown from hand picked selected seed. In 100 pounds lots or more \$4.00 per hundred f. o. b. cars at Collinston, Utah.

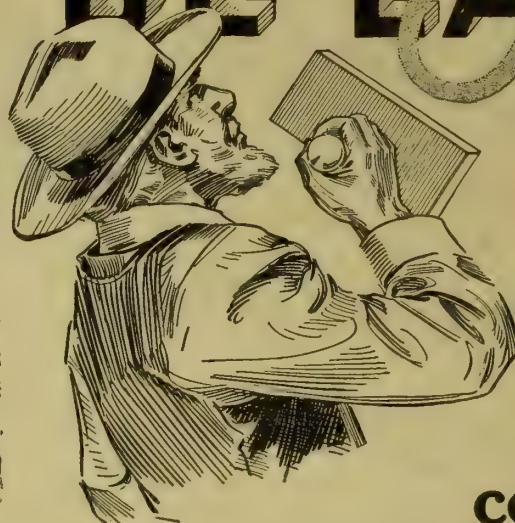
ACME STOCK FARMS

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TABLE QUEEN**  
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at the same prices we pay. This places these high-grade articles within the reach of housewives at prices very much lower than the regular retail store prices. In fact, the difference between the retail prices and our prices will pay for all the bread your family eats.

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# THE QUANTITY OF WATER REQUIRED BY CROPS.

Agricultural Lesson.

Prof. J. C. Hogenson.

Water is required by all plants. It occurs in every portion of the plant. A growing plant contains from 70 to 90 per cent, and as the plant grows older the porportion of the water decreases.

Plants obtain the water they require from the soil through their root hairs. These root hairs come in contact with the soil grains around which water is held as a film. The sucking of the root hairs makes the water film thinner. This continues as long as there is any capillary water in the soil or as long as the plant is in need of water. The water thus obtained is forced upward through the root and stem and a great deal of it transpires through the leaves. In the water taken by the plant is dissolved the mineral ingredients of plant food which are necessary for its growth. These are distributed to the various parts of the plant where they are needed. A part of the water which reaches the leaves is caused to combine with the

A rainfall of one inch amounts to over 113 tons of water per acre; 12 inches amounts to 1361 tons of water, or enough to produce 27 bushels of grain.

## Translocation of Water.

Soil moisture may, by proper handling, be moved from one layer of soil to another. If we loosen the lower layers of the soil the tendency of the water will be downward during the rainy season. If the farmer wishes to bring this to the surface he can do so by packing the surface. The upward movement may again be checked by forming a loose surface. Sometimes without the farmer's aid translocation of soil moisture takes place, as, if the surface foot is very dry, this acts as a mulch, but if a light shower occurs there will be a rapid movement of the deeper water toward the surface owing to capillary connection.

## Rainfall of the State.

The Utah Secretary of the Weather Bureau has established numerous stratus throughout the state where the weather conditions are being recorded. According to this bureau the state is divided into three parts, each of which possesses nearly a uniform

### NORTHERN SECTION

Station	Jan.	Feb.	Mch.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Alpine	1.65	2.19	1.40	1.30	2.52	.65	.88	.87	.91	1.03	1.22	.78	15.40
Blue Creek	.97	.74	.85	.77	.75	.48	.24	.35	.50	.71	.37	.97	7.70
Corinne	1.33	1.19	1.32	1.03	1.14	.53	.48	.32	.64	.86	1.00	1.59	11.43
Ft. Duchesne	.40	.51	.61	.64	.79	.19	.54	.55	1.16	.62	.18	.64	6.83
Heber	2.35	2.55	2.59	1.21	1.09	.48	1.15	.80	1.15	1.50	1.01	1.99	17.87
Huntsville	2.61	2.45	2.96	1.77	2.26	.51	.56	.53	.36	1.55	2.37	1.80	19.73
Logan	1.28	1.18	1.97	1.49	2.27	.71	.41	.39	1.26	1.00	1.13	1.16	14.25
Millville	1.46	1.23	2.55	1.37	1.84	.75	.55	.50	1.16	1.64	1.88	1.24	16.17
Ogden	1.63	1.57	1.68	1.41	1.61	.61	.25	.41	.66	1.32	1.13	1.71	13.99
Salt Lake	1.44	1.28	2.03	2.21	1.72	.79	.53	.72	.93	1.54	1.36	1.64	16.19
Snowville	1.31	.83	1.61	.92	1.43	.61	.52	.25	.63	.97	.89	1.16	11.13
Tooele	.72	1.19	2.01	.90	3.00	1.05	.64	.70	.16	1.92	1.62	1.07	14.98
Vernal	.69	.59	1.01	.49	1.04	.40	.94	.72	1.35	1.08	.60	.54	9.45
Average	1.38	1.35	1.74	1.19	1.65	.60	.59	.55	.83	1.21	1.13	1.25	13.47

### MIDDLE SECTION

Station	Jan.	Feb.	Mch.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Deseret	.43	.95	1.03	.81	.97	.36	.22	.47	.60	.55	.24	.56	7.19
Fillmore	1.24	1.50	2.18	1.91	1.28	.58	.84	.95	.92	.77	.87	.90	13.99
Levan	1.51	1.56	2.30	1.76	1.53	.64	.73	.72	1.21	1.20	.94	2.02	16.12
Mt. Pleasant	1.32	2.25	1.76	.47	1.34	.58	.87	.67	.84	.96	.88	1.58	13.52
Scipio	1.54	1.65	2.83	.80	1.40	.41	.85	.88	1.53	1.94	1.25	1.13	15.21
Thistle	1.29	1.42	1.78	.48	1.10	.50	.78	1.23	1.41	.25	1.15	1.50	12.89
Average	1.22	1.50	1.98	1.04	1.28	.51	.71	.82	.92	.85	.89	1.28	13.75

### SOUTHERN SECTION

Station	Jan.	Feb.	Mch.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Giles	.60	.32	.16	.56	.30	.21	.49	.60	.71	.93	.23	.17	5.28
Graves	1.16	.61	.43	.30	.66	.59	2.05	1.21	.51	.78	.65	.19	9.14
Loa	.52	.66	.48	.37	.46	.20	1.17	1.19	.60	.54	.33	.27	6.79
Moab	.70	.69	.88	.42	.56	.16	.60	.60	1.24	.60	.56	.92	7.93
Parowan	1.13	1.56	2.05	1.15	1.20	.21	1.09	1.40	.72	.83	.55	.94	12.83
Pinto	.76	1.36	2.54	.52	1.13	.36	.34	.85	.72	1.84	.39	.59	11.40
St. George	1.04	.88	.57	.26	.37	.06	.45	.61	.45	.34	.42	1.07	6.52
Average	.84	.87	1.01	.51	.67	.26	.88	.92	.71	.84	.45	.59	8.55

Grand Total for State.....11.92 inches

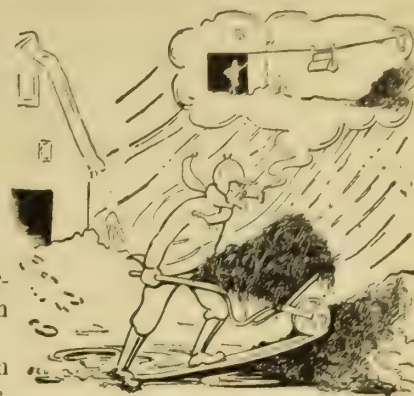
carbon taken by the plant from the air to form starch, sugars, oils and other substances.

The evaporation of water from leaves is very large. In Europe and in the Eastern States it has been found that to produce one part of dry plant matter 500 pounds of water must pass through the plant, or one on of dry lucerne is produced at an xpense of 500 tons of water.

In Utah where the climate is dry, more water is required to produce one pound of dry matter. Experiments have shown that plants here require about 750 pounds of water to make a pound of dry matter, or 50 tons of water to produce one bushel of grain. This amount is compared with the amount which fell upon the land as rain or snow it is really very small,

climate. The Northern section includes that portion of the state which lies North of an East and West line drawn through Provo, and includes Box Elder, Cache, Weber, Morgan, Davis, Summit, Salt Lake, Tooele, Utah, Wasatch, Rich, and part of Uintah Counties. The middle section extends South from the imaginary line drawn through Provo to the Southern boundries of Beaver, Piute, and Wayne Counties, and is bounded on the East by Green River. It includes Juab, San Pete, Carbon, Emery, Sevier, Millard, Beaver, Piute, and Wayne Counties. The Southern section extends from the South boundary of the middle section of the Arizona line. The counties included are Iron, Garfield, Washington, Kane, San Juan, and Grand.

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The average yearly rainfall for the Northern section is 13.46 inches; the middle section has an average yearly rainfall of 13.15 inches. The Southern section has a rainfall of only 8.55 inches.



## KNOW YOURSELF, AND THE SERVICE YOU CAN DO FOR OTHERS.

(Continued from page 3)

### First to Know Themselves.

This is a seeming absurdity. Everyone is supposed to know himself. But a serious consideration of the subject will convince almost anyone that he knows but little of himself.

A young man in school should learn his strength, his weakness, should learn in what he is strong, in what he is weak. He should learn what he can do well, what he can do fairly well, and what he cannot do at all.

Blessed is the man who has found his work.

When a man attempts to do that which he cannot do at all well, he is a misfit in society, and a clog on the world's progress. He is unhappy because he obtains no recognition, he is miserable because his efforts return him no reward. Perhaps this failure is due to wrong ideals, to his thinking he has capacities which he has not. Perhaps he has not had a free choice of occupations, and has had his destiny thrust upon him. A good school system will correct these evils. Through study of the individual and through personal direction pupils will be guided into that vocation in life for which their natural capacities render them fit.

When a man attempts to do that which he can do but fairly well, he is less useful to society than he might be. He is mediocre in his occupation where he might be a perfect success in that to which he is adapted. The rewards for his labor are small, his satisfaction in his life's work but little. He is a partial misfit, and because of this is discontented.

But when a man does that which he can do well, he gives to society the utmost of which he is capable. He is happy and contented in having found his work.

Now, this is all on the occupational side. The more capable the man, the better his work. So a man's service to society depends upon what he can

make himself personally capable of doing.

He must learn how to care for his health. He must know how to care for his body as a piece of machinery from which he is to get the greatest output with a minimum of wear and tear. Learn to do his duties well and with ease.

He must consider his mental make-up. Where his mind is strong, where it is weak. Having determined this, intelligent efforts can be made to improve his mind.

He must consider his moral make-up. Where his desires are wrong, where his mind is not clean. He must learn what there is in himself to fight. He must conquer himself. Self-conquest is the greatest of all victories.

He must consider his spiritual make-up. Here is his highest life, and he must give heed to its needs and desires.

An annual inventory of self will not do. A man must take stock of himself daily and hourly. Benjamin Franklin wrote on a slate his weaknesses and a list of the traits he desired to cultivate. He checked this slate every night. When he had partially conquered himself he changed the lists to include new evils to be eradicated and new virtues to be cultivated.

An old Arabian proverb classifies mankind in accordance with their knowledge of themselves:

He that knows, and knows that he knows is a wise man, follow him.

He that knows, and knows not that he knows is asleep, awake him.

He that knows not, and knows that he knows not is simple, teach him.

He that knows not, and knows not that he knows not is a fool, shun him.

The next thing of importance is for the individual to be himself. To live up to all that is best within him. It is one thing to know ourselves, it is quite a different thing to compel ourselves to be all that we know we can be.

This is a training in will power. It is not a question of trying to do something. It is a resolve to be what we know we can be, to do what we know we can do.

The largest idea a man can get is the determination to make himself the best he can be, physically, mentally, morally, and spiritually. To do the best he can do for all with which he comes into contact.

Lofty ideals lift a man's aim, give force to his efforts, make him effective in all his endeavors.

Being true to self brings the highest satisfaction.

The third step, to give himself to the service of others is the most important one of all.

To know ourselves is well, to be ourselves is necessary to our highest development. But to stop there is to lead a life of selfishness.

There is a higher law than the law of self. It is the law of loving thy neighbor as thyself, it is the law of universal brotherhood.

To forget ourselves, to surrender selfishness, to live not for our own purposes, but for the good we may do, and to leave the world better for having lived in it. This is the supreme object of existence. This is the ideal of ideals.

It is the essence of all great moral and religious teachings, those teachings which are above pedagogy, above

## Profit Makers

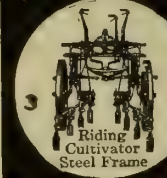
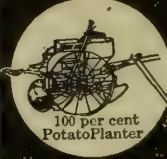
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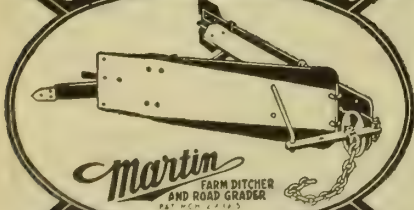
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mined by requiring him to reproduce it—a poor method at best. Because pupils can learn to repeat what they do not understand.

A better method is to determine if what he has learned has been translated into his life—to measure him by the effects his education has upon him—to determine what he has learned by the fruits which his learning produces in him.

This can be measured in Mental Achievement, and the reaction of (knowledge gained and assimilated) this mental acquisition upon the individual physically, intellectually, and morally.

1. If we violate nature's laws we are sick. Education will teach us these laws and how to keep well. Sickness sometimes comes from contagious and infectious disease. Education will teach us the necessary protection.

Our physical knowledge of ourselves will show in the care we give our bodies, in vigor of the same, and in the evidence of super-abundant health.

2. Knowledge should make a man intelligent—this intelligence should betray itself in his thinking, in his speech, in his manners, but above all in an ability to reason upon what

he has learned, to judge right courses of action, to see more deeply into life, and to adopt an equable attitude toward life.

3. To be moral is to conform to the customs, laws, and usages as required by the highest standards of our age. Education should teach the necessity for conformity to established laws, customs, and usages. The young are rebellious at the restraints laid upon them by custom. Education will teach them more than obedience, more than cheerful compliance. It will teach the necessity of established order and will cause them to conform from the earnest conviction that the welfare of society requires their earnest and loyal co-operation. Education will cause them to believe in reforms by evolution instead of by revolution.

Such a one will be honest not from policy but from conviction.

Such a one will ask himself what is right rather than what people will say.

Education will show in a man's judgment, in his wisdom, in his refinement, and in his culture.

Education will show in a man's morals, in his religious sentiments, in his belief in the brotherhood of man, in the quality of his citizenship.

From another standpoint education can be measured in the accuracy, facility, and rapidity of the mental and physical operations, and the reaction of these upon the individual—as shown in neatness, precision, punctuality, thoroughness, etc.

For example: Fine handwriting is an accomplishment that to some extent should reflect neatness, and precision upon all a person does.

To work in Mathematics accurately, with rapidity, and ease ought to enable the individual to carry these traits over into other fields of endeavor.

To achieve accuracy, facility, and rapidity in manual training work ought to make the individual manually efficient elsewhere and so with all lines of school work.

I think education is to be had for the effect it produces. If education goes no further than parrot-like learning and mere repetition it is a failure.

I predict that some day we will cease to rate, promote, and graduate pupils by what they can repeat back to us, and the slight amount of reasoning and judgment involved therein, but will rather evaluate them by the effect of our education as measured in terms of their growth in manhood and citizenship.

And among the most important of the things education shall produce, I count these among the first, the ability to enable the individual to

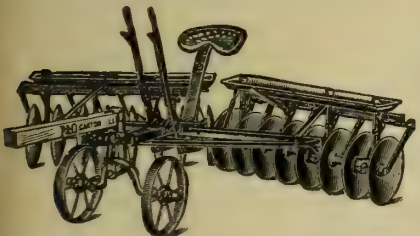
1. Know himself.
2. Be himself.
3. Forget himself—that is to serve others.

The education which does not produce these effects in its recipient should be accounted failure, and that education the zest which inculcates them to the highest degree. So I offer them as a test of education.

To know yourself, to be yourself, and to give yourself to the service of others. Of the three, the greatest is to be yourself, for in being true to yourself, you cannot be false to your duty, to your neighbor, to your family, to your citizenship, or to your God.

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The steel frame is riveted and braced to the tongue in three places, affording great strength. Low hitch, with tongue and clevis in line of draft, avoiding neck weight. Hard maple oil-soaked bearings, cheaply replaced when worn out. A simple device locks scrapers against discs, away from discs or in position to be operated by foot levers. Each gang operated by its own lever and can be set at any desired angle. Heavy bumpers relieve the bearings of all end pressure. Will do efficient work in dead or back furrows.

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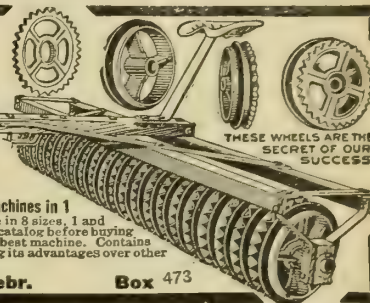
## WHEAT, ALFALFA

and other grains yield more where a perfect seed bed is prepared. The **Western** pulverizes, packs and mulches—makes a perfect seed bed at one operation. Saves seed, time and horse power. Is especially adapted for breaking crust on winter wheat or other grain or in orchards after irrigation or packing rains. It forms the hardest crust into a granular mulch without hurting the grain, and prevents evaporation.

**Western Pulverizer, Packer and Mulcher** 3 Machines in 1 made in 8 sizes, 1 and 3 sections, prices \$20 and up. We want every farmer to have our free catalog before buying a roller or packer. It proves we can save you money and have far the best machine. Contains full description, price direct to you, letters from many farmers proving its advantages over other makes, and much other valuable information. Send for it today.

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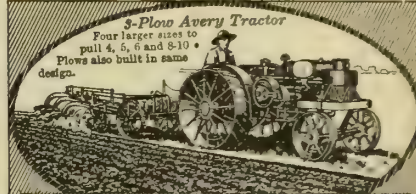
## THE HOLY EARTH

L. H. Bailey

So bountiful hath been the earth and so securely have we drawn from it our substance, that we have taken it all for granted as if it were only a gift, and with little care or conscious thought of the consequences of our use of it; nor have we very much considered the essential relation that we bear to it as living parts in the vast creation.

It is good to think of ourselves—of this teeming, tense, and aspiring human race—as a helpful and contributing part in the plan of a cosmos, and as participants in some far-reaching destiny. The idea of responsibility is much asserted of late, but we relate it mostly to the attitude of persons in the realm of conventional conduct, which we have come to regard as very exclusively the realm of morals; and we have established certain formalities that satisfy the conscience. But there is some deeper relation than all this, which we must recognize and the consequences of which we must practice. There is a director and more personal obligation than that which expends itself in loyalty to the manifold organizations and social requirements of the present day. There is a more fundamental co-operation in the scheme of things than that which deals with the proprieties or which centres about the selfishness too often expressed in the salvation of one's soul.

We can be only onlookers on that part of the cosmos that we call the far heavens, but it is possible to co-operate in the processes on the surface of the sphere. This co-operation may be conscious and definite, and also useful to the earth; that is, it may be real. What means this contact with our natural situation, this relationship to the earth to which we are born, and what signify this new exploration



## Six Reasons for Avery Tractor Success

**T**HERE are more acres plowed by Avery Tractors and Plows than by any other make. These are some of the reasons why so many men are buying Avery Outfits:

- First**—Special sliding frame which makes possible the elimination of the intermediate gear, shaft and boxings. An Avery Tractor has the least gears, the least shafting and the least bearings of any two-speed, double-drive tractor built—much means more power and longer life.
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- Sixth**—No pumps and fans.

**Complete Outfit—Tractor, Plow and Thresher—Built and Backed by One Company**  
A company with a large factory and many branch houses, which insure prompt and permanent service. Avery Plows in all sizes from 3 to 10 bottom. "Yellow-Fellow" Separators in sizes to fit each size tractor.

**Prices**—3-plow Tractor, \$760 cash; 4-plow, \$1120 cash; 5-plow, \$1680; 6-plow, \$2145; 8-10-plow, \$3475. Special small size tractor, \$295.

**Write for new 1916 Avery Catalog**  
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All mail should be addressed to the Utah Farmer  
Lehi, Utah, Kirkham Building.  
Our office at Salt Lake City, Utah,  
is at 712 McIntyre Building.



New York Office 5th Ave. Bldg.  
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Utah Horticultural Society, Utah State Dairymen's Association, Utah State Bee Keepers' Association, Bear River Valley Farmers' Protective and Commercial Association, Agricultural College Extension Department and Utah State Fair Association, Utah-Idaho Millers' and Grain Dealers' Association, Utah Fruit Growers Association.

#### OUR GUARANTEE

We guarantee every subscriber against loss thru dishonesty or attempted swindle by any advertiser in this publication. We do not attempt, however, to adjust trifling differences between the subscribers and honest, responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within thirty days from date of the transaction, and the subscriber must have mentioned Utah Farmer when writing the advertiser.

"A poor farmer is the poorest of all poor men."

Now is the time to plant some native trees around the home and on the farm. A few Pine trees near the house add to its beauty and will help in creating a love for native trees.

Increase your profits this year by overcoming some of the wastes that occurred on your farm during last year. A moment or two of thinking will bring to your mind some of the losses that you can overcome this year.

Name your farm, it is more entitled to a name than any horse or animal you may have. To have a number for the home is alright, but how much more dignified and permanent it seems to give your home a name.

Look at your windows—are they fitted to keep out the cold north wind? See that the chimneys are in perfect condition, for you may not enjoy being routed out some bitter cold night, to watch your home go up in smoke.

The other day President Brimhall, of the B. Y. U., said that "we should do the home a good turn every day"—fix a gate, level a low place, mend a fence—in fact, there are a thousand and one things to do, when one looks around, that would be a good turn to the home.

During this cold weather we keep a great many fires in our homes, and we would suggest that you inspect your chimneys every once in awhile. recently a number of chimneys were inspected, and one out of each four were found defective. Keep the chimneys in good repair, and thus avoid any loss from fire.

#### UTAH A GOOD DAIRY STATE.

Many of our citizens do not realize what a good state we have. That our opportunities are many, and especially along the dairy line. I have had a talk with Mr. J. E. Dorman in charge of Western Dairy investigation for the U. S. Department of Agriculture who recently returned from a visit to Washington D. C. On this trip he visited 23 states and made a careful study of dairy conditions. He was very optimistic as to what can be done in Utah along dairy lines. He said we needed to improve the quality of our dairy cows. We have some very good cows but on the average they were not of as good a quality as the average cows in the better dairy districts. They have been at the business for a long time and have graded their cows, culled out the poor ones. Cow testing associations have done wonders. have helped to increase the production and, by culling, have weeded out the poor ones.

In speaking of individual herds he told of a man by the name of Eastman at Plymouth Wis. who had 30 grade Holstein cows. Among them was 6 two year old heifers. These cows during 1915 produced 306,000 lbs. of milk, an average of 10,200 lbs. per cow. The best cow produced 15,000 lbs. of milk which sold for \$187.00. All the milk was sold to cheese factory and the returns for the 30 cows was \$3700.00. The cows were fed alfalfa and corn silage. The principal feed used at all the dairies he visited were silage, alfalfa and some grain.

Mr. Dorman visited Sheboygan County just a few miles north of Wilwaukee. It was a timber country 50 years ago. For years they cropped their land with wheat, oats, barley and were finally forced into the dairy business. The county is only 18 x 24 miles but it contains 106 cheese factories, employing 225 men. During 1915 they made 25 million pounds of cheese. The average price paid for milk was \$1.25 per hundred. A total amount of \$3,500,000 was paid to the farmers. The cost of manufacturing, for labor and supplies was \$437,500. The wholesale value of cheese was \$3,937,500. This amount gave a return of \$12.50 for every acre in the county, lakes, forests, swamps and streets included. Nor was this all the milk produced in the county. With the dairy men of this county it is a business proposition. Remarkable the way in which cows have improved. Every man has a standard. If the cow does not make a profit she must go.

The cow testing associations have taught them a lesson, they know the exact standing of every cow, there is no guess work, with them it is a business proposition.

Here in Utah we are even more favored with natural resources for the dairy industry than the county of Sheboygan. If our dairy men will go into the business and treat it as any business should be treated we can make a great success of dairying in Utah. Improve the quality of our cows and cull the poor ones out.

#### DR. WIDTSOE'S WEEKLY MESSAGE.

##### THE JUDGMENT ON THE FARMER

"By their fruits ye shall know them." In these words lies the wisdom of all action. Therefore, what are the fruits of farming; the essential wisdom of the tillage of the soil?

To all who will search for the spirit that makes agriculture alive must come the answer that the farmer must conserve and increase and render permanent the worth and the wealth of the earth. The farmer is constructive; to him destruction is horrible. By his work the whole earth with its people, gains in the materials out of which human joy is built. Only on this basis is agriculture entitled to its high place among the pursuits of man.

To overcrowd the range, so that all vegetation is destroyed; to make the land soggy with an excess of irrigation water; to sell off hay rich in the elements of plant food; to rob the soil of strength—these are practices that are abhorrent to the farmer who has the spirit of his work, and who hopes for fruits in his life for which he may be richly judged.

In farming, the first consideration is that the land must be more fertile at the end than in the beginning. Under cultivation it must increase in productive power. This is the supreme test by which the farmer is to be judged.

Happily enough, in the beautiful way of nature, good farming improves the soil. By deep and thorough plowing larger crops are secured with the same plant food; by the wise use of irrigation water the gain in crops is greatly increased; the wisely cropped range returns manifold above the one that is overstocked. Out of the air, with the help of the sunshine comes most of the material found in crops. When the crops are fed to animals and nature properly returned to the soil, very little of the fertility of the land is lost, and, indeed, the crop-producing power increases. The wastes on the farm when brought into the soil make it richer, and the things taken from the air water by the plant become, when incorporated into the soil, potent factors in improving the earth.

Thus, through the cycle of soil and plant and animal, with the aid of air and water and sunshine, the earth may move on towards greater richness.

The farmer must heed these new truths, and must add to the value of his farm. He must meet the coming judgment. He must listen to the cry of the coming generation as well as of his own. Thus only shall the full joy of humanity persist.

A number of different seed houses are taking up a fight to prevent the passage of House Bill No. 363, which purposes to subject seeds, plants, bulbs, etc., to the same rate of postage as other merchandise. The old rate of 2 ounces for one cent up to, and including 8 ounces, was allowed to continue, but above eight ounces was included in the parcel post rates. The new law would add considerable to the mailing cost of small packages of seeds, plants, bulbs, etc.



## SAVING ON A FARM

(Continued from page 3)

illustrate: The farmer purchases land for \$10,000 and makes a cash payment thereon of \$4,000 and gives a mortgage for the remaining \$6,000, the mortgage to draw five per cent interest. Instead of the farmer paying five per cent interest on \$6,000 annually, however, he pays seven per cent and at the expiration of twenty-five years his debt has been satisfied and his farm is free of all encumbrance.

In Europe, it is not unusual for amortization loans to run fifty years, and on a five per cent basis this would add less than one-half of one per cent to the annual rate.

Companies have been formed in America to do business on this plan but have gone back to the old way of shorter time and higher rates of interest. Showing we are not prepared yet for that system.

I notice one of the speakers recently said at one of these meetings, that the farmers should be admitted to the favored borrowing class and could and would be if he would put into effect, collectively, a better system of organization of his business. Capital is organized, he said, and so is labor; but the farmer is between the upper and the neither mill stone. The force of organized capital above and the effect of organized labor beneath take from the farmer, too large a proportion of the price the consumer pays, and until the farmer takes charge of his own business and organizes to counteract the organizations of those who sell him what he buys and buy from him what he sells, he will not attain the prosperity the money lender demands in order that he may be sure of his principal and interest. The people who own the land, the speaker said, must have a higher conception of the dignity of their occupation. Those who produce the wealth of the country should be the true aristocrats, rather than those who haul it to market and traffic in it. Rightly looked upon, he said, there is no business which demands so much good judgment, intelligence and ability and which is entitled to as much respect as that of farming.

There are some things that he says that are true but the general statement is misleading especially that the farmer should be admitted to the favored borrowing class as if there was any favored borrowing class. I remember being at a convention in St. Paul some years since and hearing that great financier James J. Hill reply to the question why farmers had to pay such high rates of interest, his

**15** <sup>95</sup> <sup>ON TRIAL</sup> <sup>Upward</sup> **American** **CREAM** **SEPARATOR**

A SOLID PROPOSITION to send new, well made, easy running, perfect skimming separator, for \$15.95. Skims cream of cold milk, making heavy or light cream. Bowl is a sanitary marvel, easily cleaned.

**ABSOLUTELY ON APPROVAL**

Different from others, which illustrates our large capacity machine. Western orders filled from western points. Whether dairy is large or small write for literature free catalog. Address:

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# AUCTION SALE

## Jersey Bulls to Be Sold at Your Price

Our reasons for a sale of this kind has been fully set forth in previous advertisements. This is absolutely the last chance and the last advertisement that will appear for this sale.

We still have six bulls the breeding of which will satisfy the most exacting purchasers. The market value of any one of these bulls would ordinarily be \$150.00 or more.

### WE HAVE DECIDED ON AN AUCTION SALE UNDER THE FOLLOWING CONDITIONS.

No animals to be sold for less than \$75.00. Bid according to name or number send your check for 10 per cent of the amount of bid.

Each animal will go to the highest bidder provided bid is \$75.00 or more. In case of a tie amount letter received first, will have preference.

All bids are to be sent to the manager of the Utah Farmer, Lehi, Utah, and marked "Cannon's Auction Sale." He will hold these bids until February 21 when they will be opened. In this way every one is guaranteed a fair deal. In case your bid is not the highest your check will be returned as no checks will be cashed except those winning in the auction sale.

Those winning in the sale will be immediately notified and arrangement made for shipment and balance payment.

All registration papers, pedigrees will be furnished by us.

We would suggest that in order to be sure of having your wants supplied that you make a first and second choice specifying how much you bid on each animal, in doing this you need only send check for 10 per cent of the highest bid.

If you do not have a large enough herd to justify you in buying a bull join with your neighbors and secure an animal that will improve the quality and production of your dairy stock.

Any information about any of these bulls will be promptly and willingly given by us, but send all bids to the manager of the Utah Farmer, Lehi, Utah.

**HUGH J. CANNON**  
**Cannon Bros.**

TEMPLETON BUILDING

SALT LAKE CITY

## 13 HOME BRED

### Registered Percheron Stallions

Buy home bred, climated stallions as cheap as eastern horses. Quality considered.

Organize your own companies, if you desire, and have a representative come and see the animals. I will not organize any companies to sell them. Horses will be sold so that individuals can buy them. Positive guarantee that as good animals can be bought here for the same price that horses of the same quality can be bought in the East.

Also offer for sale two or three pair of matched teams of registered mares.

Best foundation stock that can be bought. Some of my mares costing me over one thousand dollars.

Also have for sale 300 choice registered Rambouillet Rams and 300 registered Rambouillet yearling ewes.

**W.C. STOCK FARMS**

**ACME. HANSON, Prop.**

Collingston

Utah

reply was that if farmers would learn the same lesson that business men had learned they could borrow money at the same low rates of interest. He said the farmer should put up good security, borrow on short time and pay back the principal and interest when he agreed to pay it, he said Commercial bankers agreed with depositors to pay back deposits on demand, and could not take the chances of loaning to those who did not pay back as they agreed to and this left the borrowing farmer in the hands of

Trust Companies and Saving Banks who take mortgages and give long time at high rates of interest, and sometimes in the hands of loan agents who took advantage of the necessities of the farmer and demanded high rates of interest and big commissions.

I believe the statement of Jas. J. Hill to be true, that when the farm-

ers word can be relied on he can borrow at as low rate of interest as others, of course as I said, it also depends on the security offered the time it is borrowed for, and the amount of money borrowed.

A farmer may be justified in borrowing to buy stock to eat up what he has raised, the farmer is furnishing employment during the winter. The stock is increasing in value, and the farmer is saving the time of hauling his crops to market, and the fertilizer is improving his farm.

It is very unwise to mortgage your farms or borrow money to buy automobiles which are intended only for pleasure. If you do you would be like the spendthrift who is dissipating his inheritance and thinks he is enjoying prosperity.

One of the biggest saving on a farm

(Continued on page 12)



## THE HOME

### CARE OF THE BABY IN WINTER

So much emphasis is constantly placed upon the necessity for special care of the baby in summer, when the heat is excessive and diarrheal diseases at their worst, that the fact that winter, too, has its special dangers for the baby is sometimes overlooked.

But the combination of heat and diarrheal is hardly more serious for baby in the months of July and August, than are cold and respiratory diseases in winter.

It is plain then, that the winter care of the baby deserves special attention from everyone interested in his health and well-being.

It has been demonstrated quite conclusively that a large part of the deaths from summer diarrheal are needless, because this disease may be cured in many cases, and prevented entirely in many more by the proper care and feeding of the baby during the heated months. The same doctrine is now being applied to the group of what are commonly called "winter diseases" of babies and children, namely, bronchitis, pneumonia, "colds," and the like, which are, like diarrheal, to a large extent, preventable by the intelligent care of the baby, and by surrounding him with proper living conditions.

These proper living conditions consist both in winter and summer of suitable food, in the right amounts, at the right times, cleanliness, sufficient sleep, plenty of fresh, clean air to breathe, and protection from exposure to infectious diseases. It is chiefly the lack of these two latter requirements that cause the winter illnesses among babies.

It is not the cold of winter which

makes people sick, ordinarily, but rather the stale over-heated air inside our houses and public buildings, which we breathe and re-breathe, thus passing disease germs about from one to another. Babies are particularly liable to be infected in this way, because they spend a large part of their time indoors, and because mothers are apt to feel that to keep the baby warm the rooms must be kept shut tight.

A mother should use every means in her power to protect her baby from "taking cold," as it is commonly described. "Colds" are due to a germ and are very contagious, being easily passed from one person to another in coughing or sneezing. A nursing mother with a cold should tie a thin cloth or veil over her mouth and nose while nursing the baby, and should be careful never to cough or sneeze in his face, nor kiss him on the mouth. She should be particularly careful not to use her own handkerchief for the baby, nor sleep with him, while the disease lasts. Many babies contract these colds by being taken up and kissed by visitors, and it is a wise rule to keep the baby away from the presence of people who are coughing and sneezing. The reason for this great care as regards a baby is that a contagious cold is very often the forerunner of bronchitis and pneumonia, which diseases cause the deaths of many thousands of young babies every year, and which are infinitely easier to prevent than to cure.

Fresh air is the most effective weapon with which to fight the diseases of the respiratory tract. This does not necessarily mean cold air, for cold air may be stale, and warm air may be pure. The ventilation of most American houses is faulty, since in order to keep them warm enough to suit us we shut them so tightly as to make the air unfit to breathe, after a few hours. To counteract this tendency mothers should see to it that all the occupied rooms of the house are thoroughly aired at least twice every day in the coldest weather, while in moderate weather there should be as nearly constant a supply of fresh air throughout the house, night and day, as can be managed.

When the temperature is very low, the baby should be taken into a warm room while his nursery is being aired, and at night, his bed should be shielded from a direct draft. If there is a communicating room, the window in that room may be opened, if there is danger of chilling the air of his sleeping room.

If the cold is excessive, or if there is a raw, damp wind blowing or rain or snow is falling, the baby should be given a daily airing in a room with the windows open, or on a protected porch, dressing him warmly in out of door clothing. He should be taken out during the middle of the day, for a little while, never long enough to run the risk of chilling him. This applies especially to young and delicate babies. As a child gets old enough to walk about and thus exercise himself, he can be allowed to play for some time in an open room or where he is sheltered from the

## The Perfection of Union Pacific System Service



Is not a chance—it is the result of the expenditure of millions of dollars in money and the working-out of a positive plan of betterments, which has extended over a period of many years—

As a consequence, the Union Pacific System has been brought to a state of operating regularity—the effects of which are felt through every channel of the service; the work goes on from day to day, and the public is assured of the full benefits resulting therefrom—

When you buy transportation, you buy it with the same economic conservatism you would use in purchasing government bonds or other dependable securities—

In traveling, you are entitled to stability—service, and protection, for every dollar you expend—

The Union Pacific System has been termed, "The Standard Road of the West;" it is "standard" in everything the world implies.

Six trains east daily; two trains north and northwest.

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## Satisfying a Demand for Pure Sugar

In Utah-Idaho Sugar will be found all the highclass elements of perfect sugar. This finished product could not stand the test of superiority were it not for the fact that each step in its manufacture is carefully safeguarded by perfect sanitation.

Healthy white men, of experience, in the clean, sunlit Utah-Idaho Sugar factories are determined to make a sugar of quality, by always maintaining for it the uniform whiteness and purity known to but few sugars.

See that your grocer gives you Utah-Idaho Sugar. With its use you will enjoy success in jelly making, preserving and cooking.

**UTAH IDAHO SUGAR**  
ABSOLUTELY PURE

The Utah Idaho Sugar Company recommends attendance at the Annual Farm and Home Convention to be held at Cedar City, Utah, February 9 to 19.

### MOTHER WITH BABY

NEED SPECIAL

### CARE

We specialize  
doing nothing but

### MATERNITY WORK

THE  
**SALT LAKE  
MATERNITY HOSPITAL**  
447 THIRD EAST

Miss Gertrude Tobiasson, Superintendent.  
Graduate of the Battle Creek Sanitarium and hospital.

When you answer the advertisements in this paper tell them you saw it in the Farmer. Always buy advertised goods.

## Paint Without Oil

Remarkable Discovery That Cuts  
Down the Cost of Paint Seventy-  
Five Per Cent.

A Free Trial Package is Mailed to  
Everyone Who Writes

A. L. Rice, a prominent manufacturer of Adams, N. Y., has discovered a process of making a new kind of paint without the use of oil. He calls it Powder-paint. It comes in the form of a dry powder and all that is required is cold water to make a paint weather proof, fire proof and as durable as oil paint. It adheres to any surface, wood, stone or brick, spreads and looks like oil paint and costs about one-fourth as much.

Write to Mr. A. L. Rice, Manufacturer, 158 North St., Adams, N. Y., and he will send you a free trial package, also color card and full information showing you how you can save a good many dollars. Write to-day.

wind.

But an airing every day does not take the place of fresh air in the house, day and night, and to secure sufficient ventilation for health the mother must be on the watch to see that the rooms are opened and the air changed at frequent intervals.

### WARNING

"What are you cutting out of that paper?"

"An item about a California man securing a divorce because his wife went through his pockets."

"What are you going to do with it?"  
"Put it in my pocket."



## FEED AND PROTECT THE BIRDS

David H. Madsen.

I know a lady who each morning carefully takes the crumbs from her table and places them in a convenient spot back of the house, where hungry sparrows eagerly wait. I am thinking also of the effect this worthy example may have on some of we folks who are less thoughtful of our little feathered friends.

It appears that we are progressing, however, when I think that only a year or so ago in this town, boys were receiving bounty on the heads of young birds, and also the eggs.

It was not of the sparrows I wish to write entirely but of the Quail, a bird far more useful, more beautiful, and more in need of our help a bird whose name comes to us from sacred history as a medium used by Divine Power to save a part of the human family from starvation.

For the past month or more, I have been traveling throughout Utah County carrying food for the birds, and urging farmers to place a little grain or even "screenings" where the Quail and other birds may find it. They have been driven down from the foothills by the deep snow and are now to be found around barnyards, where in many instances they have become tame enough to eat with the chickens. The fact that they have become so tame is indeed a compliment to the farmers who have given to the birds their protection.

During eleven months in each year the Quail are working for the farmer. By eating the seed of sweet clover burdock and red-root, they manage to live during the period when the ground is covered with snow and when the snow is gone they eat all kinds of seeds that can be found on the ground, thus saving the farmer much time and labor during the summer to follow. During the spring and summer their food consists almost entirely of alfalfa weevil and other insects, directly harmful to the farmer's crops. For a short time each year they may do small damage to

strawberries and other small fruits but compared with the good they accomplish every farmer should feel indebted to them to the extent of giving them his protection and a little food during the months when they are so dependent. The Good Lord gave us the intellect and strength to take care of ourselves and in consequence of this strength and ability it is our duty to help his other creatures who are not so endowed.

The Quail is with us always, nests on our farms in the spring, rears the young there and will remain indefinitely. The value of all varieties of bird to our agricultural interests is so great and also so well known that I will need not mention it here, and the farmer who allows the slaughter of birds, will appreciate his mistake when the farms are overrun with insect pests and weeds.

I want to urge the protection of bird life, because if we encourage the extinction of those we think are harmful we let down the bars for the wholesale killing of all kinds of birds, and I am yet to be convinced that we have any that should be destroyed.

Permit me to urge every farmer to give the matter of feeding the birds in winter his earnest attention.

A few dried raisins, figs, and dates stuffed with nuts are pleasant surprises when found in the school lunch.

Lemon juice and rosewater will remove tan and whiten the skin, and taken inwardly, lemon juice on lump sugar is fine for hoarseness.

## "IT COULDN'T BE DONE"

Somebody said that it couldn't be done,

But he, with a chuckle replied,  
That "maybe it couldn't," but he'd be the one

Who wouldn't say so till he'd tried!  
So he buckled right in, with a bit of a grin

On his face. If he worried, he hid it.

He started to sing as he tackled the thing

That couldn't be done,—and he did it.

Somebody scoffed: "Oh, you'll never do that;

At least, no one has ever done it."  
But he took off his coat and he took off his hat,

And the first thing we knew he'd begun it;

With a lift of his chin, and a bit of a grin,

Without any doubting or quibbling,  
He started to sing as he tackled the thing.

That couldn't be done,—and he did it.

There are thousand to tell you it cannot be done;

There are thousands to prophesy failure;

There are thousands to point out to you, one by one,

The dangers that wait to assail you;  
But just buckle in with a bit of a grin,

Then take off your coat and go to it;  
Just start in to sing as you tackle the thing

That "cannot be done" and you'll do it.

—Ex.

## FORD JOKE BOOK

All the latest and best funny jokes, and stories on the FORD automobile. Hundreds of them and all good ones. Also JITNEY jokes, Moving Picture, and Stage jokes. Laugh till you shake. A neat colored covered book by mail for only **TEN CENTS**.

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## Crystal Purity

Sugar made at home is 100 per cent pure. It is cheaper than the foreign kind. Table and Preserving Sugar is suited for the table, for cooking, baking, canning, preserving, candy making and other purposes.

ASK FOR TABLE  
AND PRESERVING  
SUGAR.

The Grand Prize,  
the highest award,  
bestowed upon Ghirardelli's  
Ground Chocolate by the  
Panama-Pacific Exposition,  
San Francisco 1915, is an  
additional testimonial to its un-  
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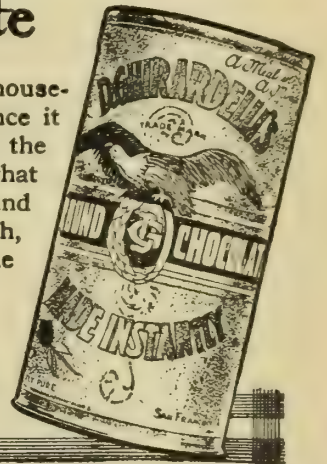
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Chocolate, is to be unmindful of health,  
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DAN PATCH 1:55 GEORGE GANO 2:02 MINOR HEIR 1:58 1/2  
JUST MADE FROM MY BIG, \$500. PAINTING.

M. W. Savage wants to Give You his Latest and Finest and Most Beautiful—  
Champion Stallion Picture,—ABSOLUTELY FREE,—POSTAGE PREPAID.  
Painted in Aug. 1915. Extra Heavy Superfine Enamel Stock,—Big Size 22 by 28,—  
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Guarantees this Splendid Color Picture,—as Described and True to Life. Art Pictures,  
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Beautiful, \$12.75 Dishes,—or 25 Piece Set of Community Reliance Silverware.  
Also Biggest, Free Premium Offer,—in the World,—My Special \$27.75 Free.

FREE.



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## get largest crops with least work

What's the use of drudging to get ordinary results when a Planet Jr Seeder or Cultivator does six men's work, and gives you an increased yield besides? Planet Jrs are patents of a man skilled both in farming and manufacturing for over 35 years. They are light, strong, lasting, and fully guaranteed.

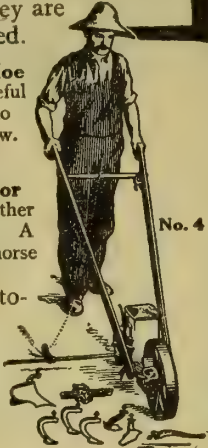


**No. 4 Planet Jr Combined Seeder and Wheel-Hoe** saves time, labor, seed and money. Almost all useful garden implements in one. Adjustable in a minute to sow all garden seeds, hoe, cultivate, weed, or plow. Pays for itself quickly, even in small gardens.

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Full Line of Garden Tools, Wheelbarrows, Rakes, Lawn Mowers, Hoes, Spading Forks, etc.



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# Interlocking CEMENT STAVE Silos



### ANDERSON FARM

Lehi, Utah  
12x35 foot silo, 100 ton capacity. A. B. Anderson, writes that his silo is a complete success.

Information about concrete on the farm, including details as to Silo building, will be furnished free. Just sign coupon below and mail it to us.

Intermountain  
Concrete Co.  
OGDEN-UTAH

Please Send Me Catalogue No. 3

NAME \_\_\_\_\_  
ADDRESS \_\_\_\_\_

### SAVING ON THE FARM.

(Continued from page 9)

will be when the farmer is not obliged to sell his crop as soon as he harvests it, but can wait until the customer or consumer comes to him, and he can save the profits of middlemen. If farmers would organize in each community and appoint one of their most capable and honest men to dispose of such crops that sell for highest prices in big quantities they would save thousands of dollars that go annually into the pockets of commission men.

Don't borrow money to put in propositions you know nothing about.

Remember this, that every person that solicits you to buy stock in other enterprises, is, as a general rule, more interested in the money he gets out of you than in making money for you. Avoid schemes where there are promotion fees, for as a general rule you can buy stock of such companies cheaper after they have been doing business some time, because it takes time to earn profits to make up the money deducted from your capital for promotion fees, for as a general rule Also remember this; that as farmers raise and must have customers to buy their products. So they in turn should buy goods of all kinds that are made in their own State as far as possible.

Now saving on a farm is just about the same as saving in any other line of business, it is more or less a matter of habit. One boy starts out in life and never learns the habit of saving. When he gets \$20.00 a month he spends it all, when he gets \$50.00 a month there are so many things he thinks he needs, he spends it all, and when he gets \$100.00 or \$200.00 a month he adds a few luxuries and spends every cent. Another boy starts the habit of saving when he gets \$20.00 a month and he saves a dollar a month and puts it in the saving bank. When he gets \$50.00 a month he saves \$5 or \$10.00 a month and when he gets \$100.00 a month the saving habit has become so fixed, that when he gets married he saves to provide for the future of his family. and soon starts a little business for himself being careful to keep his expenses lower than his profits, and so hundreds and thousands of America's successful men started saving when they were boys. If a farmer will set aside ever so small an amount yearly to improve his farm he is on the road to success. I heard of one farmer who had a fine farm left him. but with an increasing family, gradually sold one 10 acre then another until he was finally left without farm or home, when had he practiced reasonable economy he need not have sold any land, so I say in most cases it depends on the head of the family whether there is any saving on a farm.

A farmer's best assets are his sons and daughters and they surely deserve as much thought as the blooded stock and fancy poultry.

### DRY LAND CORN

A white corn which chums with drought and gives frost the slip. Grown for years on eight inches of precipitation. Good ears and splendid fodder for silage. 10 lbs. 75c 50 lbs. \$3.00, 100 lbs. \$5.00.

CHARLES E. BEARD

Milford

Utah



### The Chinese Woolflower

Introduced by us last year has proved a great success everywhere and a most wonderful floral novelty. It is a Celosia of new form and easy growth. Plants throw out scores of branches bearing balls of crinoid wool nearly a foot thick. Also many laterals with smaller heads, and fresh green foliage. Flowers form in June but none fade before frost, continuing to expand and glow with its wonderful crimson-scarlet color, very showy and succeeds anywhere.

Seed per pkt. 10c. 3 for 25c., together with new TRAILING EFFONIA AND ANNUAL SWEET WILLIAM (fine novelty) free. Our Big Catalog of Flower and Veg. Seeds, Bulbs, Plants and rare new Fruits free. Write for it. JOHN LEWIS CHILDS, Inc., Floral Park, N. Y.

## FORD Philosophy

There's a lot of satisfaction in having a good, dependable oil for your Ford automobile. Satisfaction is enjoyed by hundreds of owners of Ford cars who use—

## SIMPLEX Ford SPECIAL AVTO OIL

This is your surest protection against Friction. "Every Drop Counts."

## Utah Oil Refining Co.

Refiners  
Salt Lake City, Utah.

**EAR PERFECT TAGS**  
Samples Free  
ATTACHED INSTANTANEOUSLY  
Name and Address. Numbered if Desired.  
LEG BANDS for Poultry, Pigeons, Turkeys  
SALT LAKE STAMP CO. Salt Lake, Utah.

## ROWE'S HOG OILER

New Idea

Only Oiler made without valves, cylinders or wheels. Can't clog, stick, leak or get out of order. Guaranteed 5 years. Use crude or Medicated oil. Kills Lice; keeps pens and yards disinfected. One Oiler cares for 30 to 50 hogs. \$9.25 delivered.

**CALKO HOG POWDERS**  
is a Hog conditioner and Worm expeller. 25 lbs., \$2.00.

HEALTHY HOGS MORE PROFITS  
Catalog Sent Free.  
CALLISTER-KORTH CO.  
McIntyre Bldg. Salt Lake City, Utah

Better grease the work harness after the heavy fall work is done.



## THE DANGER POINT.

A costly building in the course of erection is never left unsupervised.

Any attempt to substitute poor and weak materials for those which the specifications call for is detected and frustrated.

No intelligent farmer leaves the development of his orchard or his potato patch to chance. He guards them from the ravages of worms and bugs, keeps the trees pruned and the weeds out of the vegetables.

Only in the building of character do men take desperate chances.

It is more difficult to keep an eye on a boy than on a building or a tree. Things happen faster with him. If he's a real boy something is happening in his vicinity every minute and his vicinity moves as suddenly as that of a flea. Nevertheless he needs to

be watched—not because he's bad but because he's absorbing impressions which mean either growth or decay.

We will assume that he is safe while he is in bed. Now quit your grinning. We all know that you used to poke your nickel novel under your pillow when mother came up to see why the light was burning, and that the struggles of later years have made you wish a thousand times that somebody had yanked you out from under the comfortables and held you under a cold shower bath every morning when you were due to rise and shine. We will assume that the boy is safe while he is in bed, because he is at home where his parents can get at him.

He is safe while he is at school. In the olden days we used to be roasting eggs down at the "bear's den" sometimes when we were supposed to be in school, but modern methods of checking up attendance, and the price of eggs, have sort of discouraged these short vacations. (Not that we paid for the eggs, but the hen farmer can now afford to keep somebody on the job.)

He's safe while he is in church—that awful headache started by the first tap of the bell on Sunday morning is sure to keep him quiet.

There is an awful leak somewhere through which a lot of perfectly good hours drop out and hit the dirt.

Somebody's got to plug that hole so full of interesting work and play that every hour will be kept clean and contribute to the youngster's nourishment. He's bound to use them all.

"His parents ought to look after him?" Certainly, but do they? How about that commercial traveller, away on three-month trips. How about the barber, in the shop till eight or nine at night? How about almost every man? Could they, if they wanted to?

The fact is that only about one man in a thousand can make one kid behave. Give him a dozen and he goes crazy. The ability to handle a bunch of young savages is a clear and distinct call to service. In the name of the Stars and Stripes we beg of you not to stuff cotton in your ears.

Yes, your family needs you—it sure does—but did you every look at it in this way? Your sons and daughters must play with somebody. They didn't think of "Ish gabibble" all alone, nor those other words that you washed out of their mouths with soap. In short, the whole gang is going one way or the other and somebody's doing the steering. Better grab the wheel yourself before the fellow in the chauffeur's seat gets so big that you can't throw him out.

The above inspiration editorial appeared in a recent number of "Scouting." I pass it on with the hope that it will find space in the Utah Farmer. I cannot think of a man who can do greater service for his brother, his church or his country than he who can lead a "crowd" of boys to an appreciation of better things. The men of tomorrow are the boys of today. "Here's to the Apache of the street! Lawbreakers of today, lawmakers of tomorrow; Builders of cities; kings and princes of America—My boy, your boy, everybody's boy! God bless them all!"

—Oscar A. Kirkham.



## HEWLETT'S LUNETTA BAKING POWDER

—enters the home on its reputation.

—remains there on its merits.

—it is the most efficient, purest and best baking powder on the market at 25c the pound.

UTAH MADE—

AT YOUR GROCERS

## The Thrifty Farmer


is now making arrangements for his

## ALFALFA, CLOVER GRASS SEEDS FIELD SEEDS GARDEN SEEDS

Order your supply now while stocks are complete.

Prices will be higher later.

## BAILEY & SONS CO. RELIABLE SEEDSMEN Est. 1865 SALT LAKE CITY, UTAH



**CALKO DIP**  
An insecticide and disinfectant for  
**Cattle, Sheep, Hogs,  
Horses and Poultry**  
45c qt., 75c half gal.,  
\$1.25 gal., delivered.

**CALKO**  
**Stock Conditioner**  
Keeps stock healthy  
and thriving.

**CALKO HEALING POWDER** heals  
saddle and collar galls, barb wire  
cuts, etc. Keeps flies flying.  
Send in your order.

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McIntyre Bldg., Salt Lake City, Utah

### HOW WE PRODUCE OUR

#### SEED POTATOES

We, like other seed houses, have had considerable trouble to find suitable seed potatoes, stock we could recommend free from disease and which would be of special merit as to reproducing itself and we made up our minds to offer our customers stock that was free from disease, true to type, color and size.

The Government has established a station for the production of pure, clean and suitable seed potatoes at Jerome, Idaho. A visit to the station convinced us that they had some clean stock which we wanted and we bought what they could spare, planted them on new sage-brush ground, watering them once, dried them up the latter part of July and harvested them the middle of October and got a yield of 40 bags per acre, none larger than hen eggs. Now we have a stock as firm as rocks, perfect in type and absolutely free from disease. We planted 45 acres of this seed stock on old alfalfa ground and produced 260 bags per acre. We also selected three varieties and sent them to the National Potato Show at Michigan and were awarded the first prize on each.

If you want potatoes of special merit, potatoes that will make you money, write us.

**VOGELER SEED CO.**  
Salt Lake City, Utah.

**DRY-FARM MANAGER** wants position. Has good knowledge of farm practice feeds and live stock; dry farm crops, climate requirements; equipments etc.; technical and practical knowledge of oils and manipulation for crop production in dry regions. Will go anywhere; am single, sober, experienced, willing to work, business like and bound to make good; age 30; best of references. State wages you can give. Address A. D. care of Utah Farmer.



SIDE VIEW 6-DISC

### Howe Weeder

We make several sizes but recommend the 6-disc size. cuts 42" wide with 4 ordinary horses \$140.00  
7-disc size, cuts 49" wide with 4 large horses \$150.00  
8-disc size, cuts 56" wide with 5 large horses \$160.00  
F. O. B Salt Lake City, Utah.

The 7 Disc Size will successfully weed and summer fallow 1 acre per day. Order early as we cannot promise prompt delivery on late orders.

Best of reference.

**DAVIS, HOWE & CO**

Salt Lake City, Utah.

**DAVIS HOWE & COMPANY,**  
Salt Lake City, Utah

September 27th, 1915.

**GENTLEMEN:**—After using your Howe Weeder and Summer Fallow machine sixty days, we are pleased to say it has saved us at least \$150.00 already in our weeding work. It does double the work we were doing before with one man and five horses, and does it better. It is by far the most successful machine for cutting out weeds and doing summer fallow work we have ever used, and we take great pleasure in recommending this machine to dry farmers as the best tool for this work we have ever seen.

Very truly yours,  
Mgr. Fort Harriman Land and Live Stock Co.  
R. F. D. No. 1.      Riverton, Utah



## Nature of Summer Work For Agriculture Teachers

I. B. Ball, Granite High School.

(Continued from last weeks issue)

It is advantageous to the teacher because it.

1. Acquaints him with his own districts, problems and with the people whose work his department seeks to better.

2. It makes it possible for the instructor to collect for winter laboratory work the economic plants, normal and pathogenic, the weed pests, insects and soils of various types.

3. It stimulates his interest for more practical class work and for more useful community work.

4. It gives a full twelve-months employment and salary.

### Some Practical Considerations of Summer Work.

#### Transportation:

1. In all rural districts in Utah, motor transportation is an absolute necessity if anything like effective follow-up work is to be done. It pays high in added efficiency.

2. Salary: To get the work started it has been found necessary for the instructor to offer to accept a monthly salary for summer work than for the winter term. However, there appears to be no good reason in justice for this. The summer work requires longer hours and throws far more direct responsibility on the instructor. He has several hundred students to oversee. The informal nature of the work puts to test immediately the personality of

the teacher. A high grade of constantly flowing initiative is demanded. Natural leadership is required, success or failure is clearly brought out. The work is new and lacks any easy examples as guides. One must make his own roads. In face of these facts it would seem that California's example may not be far amiss wherein some rural High Schools pay their twelve-month working agricultural instructor even a higher salary than the Principal of the same school.

### Actual Experiences in Summer Work.

1. In School, Project Work for High School students, it was soon observed that not a high percent of students in agricultural classes desired to enroll. This was more marked among the girls in our district than among the boys. It was partly due among the girls to the nature of some suggested projects.

Among the boys it seemed to be due to the fact that some students desired to continue to work out during the summer as they had been accustomed; others had plans for part-summer trips they wished not curtailed.

We think the tendency will grow toward a higher per cent enrolling for summer work. In fact we expect to soon make the home project a required part of class instruction in agriculture. This is required in other states.

2. Early in the spring the instructor

should spend Saturdays, and maybe other afternoons, advising with the students at their homes. This will require suitable recompense and transportation. In such projects as poultry for eggs visits to student homes during the winter are necessary. In fact a desirable item is to have provided transportation all the year, and it ought not to work out as it has in the past season with one county club worker who is paid a salary and then furnishes his own motor transportation. The leader reports the transportation item such that he finds he is earning less than he would by simply teaching during school year.

3. In the fall of the year considerable work falls on the instructor besides his classes at school. This is due to closing up the work arranging for local and high school fairs, judges and prizes, etc. Jordan's plan is to have the instructor who has summer work, have only about half day in classes at High School in spring and fall. The winter short course fills his time from November to March. If a local Round-up be held, the arranging for this may be given to him.

4. Aid in planning project work may be found in several state publications, where the work has been taken up. Among these are Massachusetts, and New York.

5. In both High School projects and grade school clubs we have found this: The beginning is the most critical stage. The leader who can visit the homes at least once in the spring before schools close will have a great advantage, and then every boy or girl be visited again just as early in June as is possible.

6. One or two well planned hikes for each convenient group should be carried out during the summer. But they truly should be well planned, snappy and not too long. A new face will greatly help, as from the A. C. or U. of U. or the County Agent, etc.

Swimming is a country boys best summer sport.

7. In most cases, it is best to cater to local pride and have each grade school hold a club fair about two weeks after school opens. The winners to come to the district fair at the High School. Parents can come to these local school fairs. We were agreeably surprised to see how each school tried to excell in making these fairs real community exhibits. In some cases the parents were interested and made exhibits of horses and dairy cows.

Again, the local fairs give the local principal and his corps a direct part in club work. This must be done, else he will justly feel that club work is not part of school work, but something (a fad) simply hung on to school work.

8. In short, club work for grades will soon develop into a definite part of school work, required and carefully outlined, supervised and finished. Just as high school Project work is now a part of school work. School credits are given in both cases.

We state again as we stated at the beginning that summer work for Agricultural Teachers comprises 6 lines of work:

(1) Home School Projects. (2) Boys' Club Work. (3) Parent Advisory Work or sort of Assistant to

(Continued on page 15)

# Six Percent Money to Loan On Long Time

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### THIS IS HOW WE GET OUR 6% MONEY.

Each share of stock is sold for \$100.00. Of this amount \$50 is placed in the Surplus, or Working Fund, and \$50 in the Capital Stock, or Guarantee Fund.

The Surplus is loaned to the members at 6 per cent interest per annum on first mortgages.

These mortgages are not sold, but they are placed in trust and bonds equal to their face value, bearing 5 per cent interest and secured by them, are issued and sold.

The money received from the sale of the bonds is then loaned at 6 per cent interest on first mortgages, which are also placed in trust, and bonds of equal value, bearing 5 per cent interest, are issued and sold.

This process is repeated until the Association has outstanding bonds equal to fifteen times the amount of its Capital and Surplus.

In addition to having the bonds secured by an equal amount in mortgages, the Guarantee Fund is pledged as further security for the bonds of the Association.

The bonds of the Association, thus secured, will be one of the highest class bonds issued in the United States, and will enable the Association to secure money for its members at the lowest possible rate.

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a year will pay a loan from us, both interest and principal in 35 years, without commissions, renewal charges, or other expense, and you may pay off your entire loan any time after five years.

Under the present conditions you are paying 9 per cent, or \$90 a year for interest alone, and at the end of the period for which it was loaned you still owe the principal of \$1000. Under our plan \$73 a year will pay off a loan from us of \$1000, both interest and principal at the end of the time.

This is a Co-operative Association, therefore, you must necessarily become a shareholder in order to enjoy the advantages it has to offer. Clip out, fill in and mail the coupon today. The sooner you join the Association, the sooner you will get your loan.

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SALT LAKE CITY, UTAH.

Without obligating me in any way please send me your sixteen-page booklet which explains in detail the plan of The Inter-Mountain Rural Credit Association and tells how I can become a member and enjoy the benefits of this co-operative organization of Utah and Idaho.

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Address.....

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This market place offers our subscribers and readers a very good place to advertise. If you have something to sell or want to buy here is the place to tell it. These advertisements are read because they offer bargains, your bargain should be here. Take advantage of this opportunity today.

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## THE GEM HERD.

### Improved Chester White Swine

The Home of the Western Prize Herd  
My winnings at Idaho State Fair 1913, were 13 first, 3 seconds, champion boar and sow, and champion fat barrow. At a Tri-County fair held at Jerome, Ida., I took all but one second. I have anything wanted in Chesters from a weaning pig to a champion boar or sow at prices all can afford. High class stock. Write me.

For Reference—all old customers.

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## FOR SALE

Foundation Stock in Holstein Fresian's and Duroc Jerseys. Will exchange a few for hay or grain. For breeding and particulars write

**JOHN W. STUBBS**

R. D. No. 2. Provo, Utah.

## Percheron Stallion

An unusual opportunity to purchase a good stallion. Foaled June 1913. Utah bred. Sire imported Damocles. Very large and finely developed. Direct all inquiries to B. T., Utah Farmer, Lehi, Utah.

## DAY OLD CHICKS AND HATCHING EGGS.

LEGHORNS, ROCKS, REDS AND MINORCAS. Hardy winter laying strains. Prices reasonable. Send for free circular. Do it now.

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200	\$ 1.25
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**BABY CHICKS & HATCHING EGGS**  
White Leghorns, Brown Leghorns, Barred Rocks, R. I. Reds, Black Minorcas, Anconas, Buff and White Orphingtons. Prices on application.

**THE ORLAND HATCHERY**  
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**HOUSE AND BARN PLAN BOOK**  
**FREE**—Gives direct-from-mill prices on many designs. Send us your carpenter's bill for quick estimate. Western Lumber and Millwork Company, Tacoma, Washington.

First class Jersey calves for sale, **CHEAP**. Also one 2 year old bull and the old herd bull. All registered.

Apply to  
**S. E. PRICE**

St. School for the Deaf and the Blind.  
Ogden, Utah.

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Single Comb White Leghorns. The kind that pay for five or six years. Especially bred for long profitable service. Send for booklet. Early orders insure your wants.

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**4—BEST LAYING STRAINS—4**  
Rose Comb Rhode Island Reds and White Wyandottes, Single Comb Black Minorcas and White Leghorns. Egg fertility and stock guaranteed. Write your wants. E. C. Blanpied, Box 60, Milford Utah.

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A BARGAIN  
"SEE ME."

65 acres in Utah county with water right will make first-class beet and alfalfa land, a bargain at \$120.00 per acre, small cash payment, no other payment required for five years.

640 acres, some hay land, water right. Can grow at least 80 bushels oats per acre, fine for hay, grain and stock. A bargain at \$15.00 per acre, small cash payment, or might take city property at cash value.

860-acre improved ranch, independent water right, one mile from town and railroad, nice herd of cattle, horses, hogs, lot of implements, hay 5000 bushels oats go with place. First-class free range. Cheap at \$35,000.00. Terms or would take city property at cash value.

IF YOU HAVE A BARGAIN  
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**GEO. W. DANLEY**  
Was. 2989. 707 Walker Bank Bldg.

## Money to Loan

On improved farms with primary water rights, at reasonable rates."

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Some people still think, that a "razor-back" if "crowded" will develop into as large a hog as the average purebred.

Scientific experiments prove that purebreds are "larger boned," more prolific, better rustlers, and have a greater capacity for growth than grades.

Our herd is made up of eight of the choice blood strains of the U. S. The Defender, Volunteer, Illustrator, Good Enough, and Wonder strains are famous. Look them up, and see for yourself.

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**SEEDS**—Direct from the worlds best growers. Sold to the planters at wholesale prices. Guarantee tag upon every shipment. Your moneys worth or your money back. Sudan grass seed only \$6.00 cwt. Other seeds of highest quality at lowest prices. Wholesale price list free. C. E. White Seed Co. Plainview, Texas.

Agents \$50 weekly. Sell our 15 house-hold inventions. New, live quick sellers. General agents getting rich. Every home buys one or more. Samples furnished active workers. Write now, Oregon Sales Co., Box 1158, Portland Oregon.

## FOR SALE CHEAP

Some Jubilee Incubators as good as new, holding 500 eggs. Also two successful machines holding 320 eggs each.

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## Holsteins For Sale

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Utah

## FLOWER GARDENS AND FORESTS UNDER THE SEA.

May be seen from the glass bottom boat in the harbor of Avalon, Santa Catalina Island. One of the interesting personally conducted side trips in connection with the Salt Lake Route big Mid-Winter Excursion on January 29th, \$35.00 to Los Angeles and return, on that date only. Special trains with standard and Tourist sleeping cars, Dining and Observation cars start from Salt Lake City. Make your reservations early. Further particulars concerning side trips, routes, etc., may be had from any Salt Lake Route Agent or by addressing, J. H. Manderfield A. G. P. A. 10 E. 3rd South St., Salt Lake City, Utah.

**WANTED** to hear from owner of good farm for sale. Send description and cash price. R. G. List, Minneapolis, Minn.

## LAND FOR SALE

1500 a., \$75,000.00; free water; near railroad. Caldwell, Wilson, Idaho.

## FOR SALE OR TRADE

Two fine, two year-old Holstein Bulls in fine condition. Owner wishes to exchange for Durham Short Horns of the milk strain. Stock to come from your own locality. Address

**J. R. SMITH**

202 Hooper Building  
Salt Lake City, Utah  
Phone Wasatch 1983.

## FOR SALE

Percheron Stallion five years weighs 1850 pounds, is registered in the American Registry Company and has a number of colts that can be seen. Price \$1000.

**ARTHUR LIGHTNER**

Minersville Utah

## NATURE OF SUMMER WORK FOR AGRICULTURE TEACHERS

(Continued from page 14)

County Agent. (4) Collecting Material for Agricultural Museum and for Agricultural Laboratory Work. (5) School Garden or Farm. (6) His own farm.

Each line is distinct and taken altogether they constitute a splendid service to Industrial Education and community service.

## CORRECTED

Teacher—Earl, did you whisper today?

Earl—Yes, wunst.

Teacher—Clarence, should Earl have said "wunst?"

Clarence—No, he should have said "twicet."



# Oakland

## LIGHT SIX \$795



"Sturdy as the Oak"

## For Every Purse an Oakland Car

**Y**OUR choice of Oakland design, whether it be a 4, 6 or 8 cylinder car, represents an extraordinary value at its respective price. Each Oakland model, in engine efficiency, style features and comfort attainments, is the best in its particular class that Oakland has ever offered.

For average family use we strongly urge the Oakland Six. Within its 110-inch wheel-base it carries full seating capacity and comfortable leg room for five passengers. It weighs but little more than a ton—2100 pounds, to be exact—and with its development of 30 to 35 horsepower, it will carry your family sturdily and cozily everywhere that wheels may run—at a surprisingly low cost of upkeep, too.

Its low center of gravity with its underslung springs minimizes body sway and spring rebound and also holds the car well to the road under all conditions of driving. While the Oakland Six is a real man's car for power, the ladies will appreciate the pleasure of its easy control.

**T**HIS handsome car, with its modest price and low upkeep cost, is a splendid family investment. Try it out at the nearest dealer's and see for yourself how well it fits the family needs for all sorts of use.

The Oakland Six is made in two models—Five-Passenger Touring Car and Two-Passenger Roadster. Price, Model 32, \$795, f. o. b. Pontiac.

### Other Distinguished Oaklands

The Oakland Four, with its high-speed motor, gives more revolutions per minute; consequently a faster turning of the crankshaft, a greater velocity of the fly-wheel affording smoother operation. All the flexibility of added cylinders with the simplicity and economy of the Four.

The Oakland Eight—a big, luxurious car; built for seven passengers—room for more. Add to the flexibility of eight cylinders the efficiency of the high-speed motor and counter-balanced crankshaft; the result is a smooth running motor of 73-horsepower with practically no vibration at any range of speed.

**Model 38—Five-Passenger Touring, Two-Passenger Roadster, Two-Passenger Speedster—\$1050, f. o. b. Pontiac**

**Model 50—A Big, Powerful, Seven-Passenger Touring Car—\$1585, f. o. b. Pontiac**

*Ask the Local Oakland Dealer. Catalog on Request*

**Oakland Motor Company**

**Pontiac, Michigan**



UT

Ag. sec.

# THE UTAH FARMER

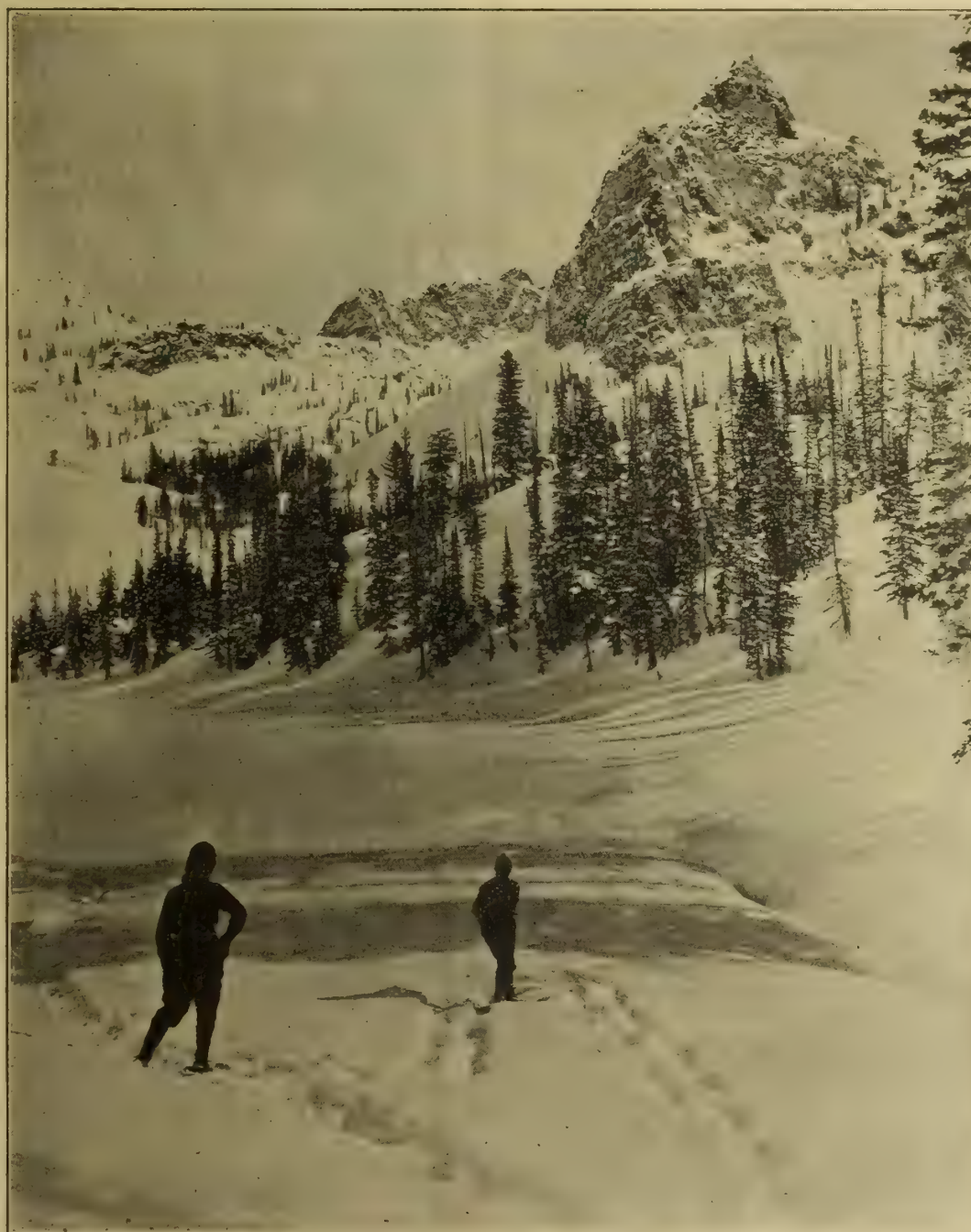
Devoted to Agriculture in the Rocky Mountain Region

OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE

VOLUME XII; No. 29

LEHI AND SALT LAKE CITY, UTAH

FEBRUARY 19, 1916



If there are any who question the amount of snow stored away in some of our mountains—well—this picture tells its own story. This is next summer's water supply in cold storage. Plenty of late water next summer means much to our crops. Prospects at the present time, as far as our water supply is concerned, certainly looks very good.



# SPECIAL

High Grade, Carefully Recleaned  
 Alfalfa, Red Clover,  
 Alsike Clover,  
 White Dutch Clover,  
 Sweet Clover,  
 Grass and Garden Seeds

SEND FOR BIG CATALOGUE  
 POULTRY SUPPLIES

**Vogeler Seed Co.**  
 Salt Lake City, Utah

## Beaverhead Valley

MONTANA

**Offers Wonderful Opportunities  
 to Utah Farmers**

Read the following which was printed in the Anaconda Standard, December 11, 1915. It is the Ranch we are now subdividing and selling.

### Montana Oats Sell at High Record Price

One of the largest sales of oats ever made in Montana was announced yesterday when the Beaverhead Ranch company of Dillon, one of the Penwell companies, sold to the Gould Grain company of Minneapolis 3,000,000 pounds of oats at \$1.15 per hundred. The total consideration was \$34,500.

These 1,500 tons of oats loaded in 50 cars will make two trainloads and will be sent East as fast as they can be loaded.

This is one more evidence of the fast-increasing prominence of Montana as a grain-producing state and the price received shows what enormous profits the farmers of Montana are making this year.

Get busy and see this property! Here is the country where you can make some money.

### Sold On Long Terms, Easy Payments

Railroad station, school house, telephone line on property.

Butte city affords highest priced market in the West.

Unquestionably the best opportunity for home-seekers now being offered.

For photographs and full information see

**Beaverhead Land Co.**

516 Vermont Bldg.

Salt Lake City, Utah.



**The Red Ball on  
 "Ball-Band"  
 is right where  
 you can see it**

All over America men look for the Red Ball when they buy rubber footwear. Eight and one-half million men won't buy any other kind. They know that the Red Ball stands for value that they cannot get in any other kind.

Begin to figure the cost of rubber footwear on its cost per days wear, and you will see that "Ball-Band" gives greatest service at lowest cost.

**"BALL (Red) BAND"**

is made right and stays right. "Ball-Band" boots are vacuum cured. During the vulcanizing this process causes a tremendous pressure on the fabric and rubber, and makes the boot one solid piece.

More than 50,000 stores sell "Ball-Band" Rubber Footwear. If you have any difficulty getting "Ball-Band," write us, giving the name of your merchant. We will see that you are supplied.

**Write anyway for our free booklet, "More Days Wear"**

Tells how to treat rubber footwear so as to get the full worth of it.

#### Something New

"Ball-Band" Light Weight Rubbers for street wear in Men's, Women's and Children's sizes. They are "Ball-Band" Quality and Value. Look for the Red Ball on the sole.

**MISHAWAKA WOOLEN MFG. CO., 370 Water St., Mishawaka, Ind.**

"The House That Pays Millions for Quality"

#### ANSWER THE ADVERTISERS.

in this issue and tell them that you saw their adv. in the UTAH Farmer. They like to know where they get the best returns. It helps us if you tell them about their adv. in the Utah Farmer.



ESTABLISHED  
1904.  
—  
PUBLISHED  
EVERY  
SATURDAY.

# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region.

ONE DOLLAR  
A YEAR.  
—  
FOREIGN  
SUBSCRIPTION  
\$1.50

COMBINED WITH THE DESERET FARMER AND ROCKY MOUNTAIN FARMING.

VOLUME XII. LEHI, UTAH, SATURDAY, FEBRUARY 19, 1916 No. 29

## How to Make Ten Acres Pay

Lorin Todd Oldroyd.

In attempting to make a ten acre farm pay, the farmer must grow such crops and raise such live-stock as will give him employment throughout the year. If he grows wheat, or beets, he is out of employment during a large part of the year and must either idle his time away, or leave his farm and go off and work for the other fellow. The idler can not make any sized farm pay; the man who leaves his farm during part of the year might just as well sell out, because the best farm won't pay unless the "boss is on the job." One of the main reasons why so many farmers in our state do not make average wages is because they do not have work enough to keep them busy all the time. What would happen to the merchant who only opened his store two or three days a week, or the banker who was at his desk only three or four months during the summer? The answer is obvious. Why, then, should a man expect to make his farm turn out the cash if he is on the job only part of the time? Farming is a business; a business which is becoming more and more scientific. It must be studied, and every detail worked out in order to be made a success.

In formulating a plan whereby ten acres can be made to pay, the first important question is to give employment to the farmer and his family throughout the year. To do this a combination of intensive and diversified farming is essential. By intensive farming is meant the application of a comparably large amount of labor and capital on the land. Truck gardening and sugar beet growing are examples of intensive farming while wheat and alfalfa would represent the opposite, or extensive farming. Where different crops are grown and a few live stock kept the type of farming is diversified; i. e.; the farmer obtains his income from different crops and products instead of from any single one.

I shall assume in this discussion that Mr. Smith owns a ten acre improved farm; improvements consisting of an average farm home, barn, stables, and chicken house. The land is of average fertility and may be located in an average farming district which, however, is not too remote from the railroad. The location, of course, will considerably affect the returns so we shall not choose a farm near our larger cities.

Smith must be a man who is willing to work. He must have some business ability and be wide awake in looking after the details of the

farm. He and his family must make their home on the farm and stick to it. The profits will not commence to roll in at once but if they, "stay on the farm," success will crown their efforts. Many men fail in farming because they do not attend to the smaller things. They do not keep the fence repaired and the best cow is badly cut. They leave the water-keg in the field and next year a new one must be purchased. They fail to keep the bolts tight on the reaper and a days time is lost while they go to

Do they go out and toil  
All day in the center of the field,  
And quite forget through thought-  
lessness  
Where is the biggest yield?

Let's draw a lesson now I pray  
And profit by this tale;  
Lest others in this walk of life  
Like farmer Smith shall fail.  
"Whatever you may try to do,  
O wherever you may go,  
Be sure in every walk of life  
To everything there mow."



How The Snow Looks In Our Mountains.

town and spend four or five dollars for repairs.

Some one has expressed this same idea as follows:

Well, farmer Smith is busy now  
With his big crop of hay;  
He's in the field at six o'clock,  
And works ten hours each day.  
He cares not for his sweaty brow,  
Or the blisters on his hands;  
He's not afraid of any toil  
And he's a grand good man.

He's always lived an upright life,  
And paid his honest debts;  
And as he looks on bygone days  
He has but few regrets.  
But there's a mortgage on his farm,  
Which seems to him immense;  
It's there because he does not mow  
The corners of his fence.

Say, are there other farmer Smiths  
That any of you know?  
Do others let the best of hay  
In their fence corners grow?

It is the little things that count  
and we want farmer Smith to be  
awake.

The plan which I wish to outline  
in this paper and by which I shall  
attempt to make the average ten  
acres pay is as follows:

I have the farm with improvements  
consisting, as stated before, of farm  
buildings and farm implements. I  
shall buy a new wagon and harness,  
but the remaining implements are in  
good condition when the place is  
purchased.

I shall buy ten head of good grade  
cows for which I shall pay \$75 each.  
My intention is to build up a dairy  
herd, and find that the most economi-  
cal way to do this, for the man with-  
out capital, is to commence with  
grade stock. I shall breed my cows  
to a pure-blood holstein-bull and in  
seven or eight years they ought to be  
good producers. I desire the holstein  
dairy cattle because I intend skim-  
ming my milk and selling the cream.

On account of the extra quantity  
which this breed produces, the skim  
milk will be of great value in feed-  
ing pigs and chickens, of which I in-  
tend having a few.

I shall buy five good brood sows of  
the Berkshire type, because they are  
one of the leading breeds and I am  
partial to them. Any farmer should  
have a type of livestock which he  
likes. (If he likes a poodle better  
than a big fine Collie Shepard dog, he  
should, by all means, have a poodle.)  
One other thing, the man who does-  
n't like animals or nature had better  
not degrade the profession by going  
into the farming business because he  
is sure to fail.

There is good profit received from  
a few chickens, if properly taken  
care of. Therefore I shall aim to  
keep one hundred hens on my farm.  
Before buying any breed of poultry  
I should investigate the merits of dif-  
ferent kinds and the purpose for  
which I intended raising them. Here,  
too, I should choose according to my  
likes and white leghorns would be  
placed in my hen house.

Then a team must be had. I might  
not have work for it all the time, on  
such a small farm, but the man who  
has been brought up on the farm  
would never think of hiring a team  
to do his plowing even though it  
could be done cheaper. Old Lue and  
Mat are almost like members of the  
family and farm life would not be  
complete without them. A pair of  
mares weighing between twelve and  
thirteen hundred pounds would an-  
swer my purpose very well. They  
would be heavy enough to do my  
work and would do to hitch up on the  
surrey, when I get rich enough to  
buy one, and drive to town.

Two acres of my land would be  
used for farm building, yards, etc.,  
and a farm garden. I should have  
four acres in alfalfa and the remain-  
ing four in sugar beets.

Capital is necessary to make the  
purposed purchase so that I should  
have to mortgage my farm for \$1600  
at 6 per cent interest for ten years.

### Purchases.

Harness .....	\$ 60.00
Wagon .....	115.00
Ten cows @ \$75.....	750.00
Five sows @ \$25.....	125.00
Team .....	300.00
110 chickens .....	110.00
Incidental expenses, taxes etc	140.00
	\$1600.00

(Continued on page 6)





Combined with the  
Deseret Farmer and Rocky Mountain Farming.  
Established - - - - - 1904

Entered as second-class matter in the postoffice at  
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LEHI, UTAH.

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Canadian and Foreign postage 50 cents a year extra.

#### OFFICES

All mail should be addressed to the Utah Farmer  
Lehi, Utah, Kirkham Building.  
Our office at Salt Lake City, Utah,  
is at 712 McIntyre Building.



New York Office 5th Ave. Bldg.  
S. E. LEITH, Mgr

Chicago Office Steger Bld.  
T. B. COSTELLO, Mgr.

St. Louis Globe-Dem. Bldg.  
A. C. COUR, Mgr

**Change in Address**—When ordering a change in the address, subscribers should be sure to give their former as well as their present address, otherwise the address cannot be changed. This is a matter of importance to you and to us.

**Advertising Rates**—The advertising rates will be sent upon application.

#### OFFICIAL ORGAN

Utah Horticultural Society, Utah State Dairymen's Association, Utah State Bee Keepers' Association, Bear River Valley Farmers' Protective and Commercial Association, Agricultural College Extension Department and Utah State Fair Association, Utah-Idaho Millers' and Grain Dealers' Association, Utah Fruit Growers Association.

#### OUR GUARANTEE

We guarantee every subscriber against loss thru dishonesty or attempted swindle by any advertiser in this publication. We do not attempt, however, to adjust trifling differences between the subscribers and honest, responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within thirty days from date of the transaction, and the subscriber must have mentioned Utah Farmer when writing the advertiser.

#### DR. JOHN A. WIDTSOE.

The development of Utah's agriculture has been, during the last 22 years the main concern of Dr. John A. Widtsøe, who is to be transferred next summer from the Presidency of the Utah Agricultural College to the Presidency of the University of Utah.

When Dr. Widtsøe first entered the service of the Agricultural College, in the summer of 1894, he undertook the study of the changes that occur in lucern during its growth, and by the knowledge thus gained, was able to fix more accurately than before the best time at which to cut this most important forage crop. The change in practice which has followed this investigation has increased greatly the value of the lucern crop in the State.

About the time Dr. Widtsøe began his agricultural work for Utah the Lehi Sugar Factory was just emerging from its first difficult years. It had been shown that sugar beet raising and beet sugar manufacturing could be made successful under irrigation in the Great Basin. The next question was whether sugar beets of satisfactory sugar content and acre yield could be grown generally throughout the State. Dr. Widtsøe therefore secured the co-operation of several hundred farmers, in nearly every county of the State who during two seasons grew sugar beets, samples of which were analyzed in the College laboratories. This investigation proved that sugar beets of high quality can be grown in practically every part of the State. This has been corroborated by the experience of the beet sugar factories.

Dr. Widtsøe was the first of the officers of the Utah Experiment Station to extend his researches over the State. As early as 1895 he began the study of the soils of Utah. The bulletin on the

(Continued on page 16)

#### HOW WE GET ADVERTISING.

We have many solicitors and canvassers whose duty it is to get us advertising, but, first, to investigate as thoroughly as possible, and know that the article to be advertised is alright, and that the business methods of the firms are strictly honest. We do this to protect our readers. Sometimes we get fooled, but we do our best to see that every man or firm mentioned in this paper is reliable.

We tell those whom we solicit for business that the Utah Farmer has so many readers; that they are prosperous, intelligent farmers who are ready to buy their kind of goods if they are advertised in the Utah Farmer, because our subscribers reads this paper each week, and have confidence in what they see advertised in its columns.

We tell the business man how we are trying to make the Utah Farmer very helpful and very welcome in the best homes. How we are helping to solve their problems, and that this should be able to make good customers out of these same readers. We tell them that we accept none but high class advertising, so that we are able to guarantee that our readers will be treated fairly. We tell them how interested and loyal our readers are to the Utah Farmer; how they want to see the paper prosper, and for that reason, they will give their patronage to the merchant who helps support our paper by handling merchandise advertised in it.

Now, this is why we ask your earnest support in reading our advertising, and buying from our advertisers whenever possible. Spend a few minutes time in looking over this issue of the Utah Farmer, and see if you do not find a number of things that interest you at this time of the year.

#### PLANT BETTER SEEDS.

Better seeds would save or make us many thousands of dollars. Many farmers have become converted to pure bred live stock and will pay large sums to secure the right kind of breeding animals. Those same people will often use poor seed and even sell the best grain and use what is left for seed. We will some day learn the value of good seed and the best varieties. To make proper selection is no easy matter, in many cases we have to depend upon the seed men, or the ones from whom we purchase. This makes the buying of seeds important and we should deal only with reliable seed houses. Don't buy seeds because they are a little cheaper as regards first cost, they may be the most expensive, may not even grow an average crop. Too much time is spent in preparing the seed bed and caring for the young plants to take any chance on what kind of a crop the seed will produce. It pays to buy only the best seeds and from reliable houses who will not overcharge you for the quality you purchase.

A billion cannot be counted or scarcely comprehended, it is believed to be beyond the capacity of any human mind to grasp. Yet we are speaking of money in terms of the billion. Recently a loan of 14,000,000,000 francs—in our money \$2,800,000,000—was made in France and to impress upon the people the magnitude of the loan, a French paper, reminds them that only 1,097,212,000 minutes have

#### DR. WIDTSOE'S WEEKLY MESSAGE.

##### THE FARMER AS MASTER.

In our western country, the necessity of irrigation, the light rainfall on the dry farms and the great distances from centers of population, offset only by larger acre yields, make the cost of production and marketing of crops somewhat larger than in some other sections of the country.

It is therefore a fundamental principle of Utah farming that crops must be grown that yield high acre returns. The best crops for this purpose are those that may be manufactured on or near the farm, into concentrated forms easily shipped and commanding good prices. Meat, condensed milk or butter or cheese made from lucern, sugar from sugar beets and flour from wheat, appeal to a more certain market and leave more money in the State, than lucern, sugar beets or wheat would do if sold in the raw form. Moreover, the existence of factories, requiring a certain supply of crops for their operation always tends to increase the price of the crop. The blessings that have come from the beet sugar industry in this State is ample illustration of the value of growing crops that may be manufactured.

There are not enough such enterprises in the State. The sugar business is well established. More flour mills might be established. There is yet room for more canneries, drying plants, packing plants and industries for preserving food. Utah has not yet touched the hemp and flax industries, though both may be grown very profitably. Oil bearing seeds, like the sunflower seeds, might develop a great manufacturing industry.

The farmer must learn not to wait for some capitalist to come in and tell him when to begin such industries. The farmers of a community should meet and soberly discuss the possibilities. For a season every farmer could try the crops thought most likely on a patch of his ground. When it is found that certain crops do well in a locality, the next move would be to interest capital or form a co-operative organization to establish the industry.

The farmer should take the initiative in such matters. The man who waits on others makes slow progress. The farm bureaus of Utah might well make the development of new agricultural industries for Utah the main topic for discussion and sober thought. Then new prosperity will come; and our fame will increase.

In such discussions let us remember that in irrigation, with the possibility to control the water applied to crops, we have a power, not possessed in regions of rainfall of producing the kinds of crops demanded by the market or by the factory. By taking advantage of this power, and adding to our crops susceptible of being manufactured, Utah will move rapidly to greater agricultural prosperity.

elapsed since the death of Christ. How about your billion-dollar Congresses, exports of a billion and the billion war loans?



## DAIRYING

Utah Farmer:

Gentlemen:—Please give in the columns of your paper the relative digestible nutrients in the first, second and third crop of alfalfa cured hay, the percent of albuminoids carbohydrates and fat, and oblige.

Yours very respectfully,

J. C. Wheelon.

Answered by Dr. W. E. Carroll.

The following table gives the chemical composition of the first, second and third crops alfalfa hay. The second table gives the average percentage digestibility of the respective crops.

Crop	Water	Ash	Protein	Crude Fibre	Nitrogen free extract	Fat
First	6.3	7.3	14.5	25.9	44.3	1.7
Second	6.2	6.9	15.8	31.4	38.0	1.7
Third	7.2	7.4	17.3	29.5	36.8	1.8

	Dry Matter	Ash	Crude Protein	Crude Fat	Crude Fibre	Nitrogen free extract
First	58.78	41.62	65.07	35.00	40.15	72.41
Second	60.32	46.16	70.48	42.25	44.36	71.74
Third	58.17	44.25	69.30	41.51	34.30	71.00

### DISTEMPER.

Utah Farmer:

Please send a remedy for distemper in horses. My neighbor has a colt with distemper. Please send a receipt for Spinal Meningitis in horses? Thanking you for the same.

BEN WATTS.

Answered by Dr. H. J. Frederick.

1. Distemper: Young horses are very often affected with a contagious disease that we call Distemper. Where this affection is found in a neighborhood most of the animals contract the same. Animals affected usually swell under the jaw and it is well to promote this abscess formation by applying a good poultice or liniment to the enlargement. As soon as it is soft it should be opened and the pus allowed to discharge. Clean the cavity with a good antiseptic solution consisting of a two per cent solution of carbolic acid or creolin. The animals should receive good laxative food and should be kept away from draughts as much as possible. It is well to stable and blanket them. Sometimes it is necessary—where they are greatly depressed—to give them a stimulant. For this purpose about half a pint of alcohol in a pint of water can be given. If the animal has difficulty in breathing, we sometimes give it a steam bath. This is prepared by heating a pail half full of hot water, and a number of stones or bricks are heated in the fire at the same time. Put one or two of these

stones into the hot water, also about one or two tablespoonfuls of creolin or some disinfectant this is put into a clean bag and the bag held up over the nostrils compelling the animal to inhale the vapor. This loosens up the infection in the head and helps to overcome the trouble. Good nursing is one of the main requisites. Vaccination is best prevention.

2. Spinal Meningitis: For Spinal Meningitis in horses we have no specific to overcome the trouble. We treat according to the conditions manifest. Very often Potassium Iodide in two-dram-doses with Nux Vomica in dram-doses is given in the grain daily. Good nutritious laxative food and good nursing are absolutely necessary. It is sometimes necessary to place the animal in a sling.

Spanish Fork, Utah.

Utah Farmer:

Dear Sir:—Will you kindly answer the following through the Utah Farmer?

I have a valuable mare which I broke last spring at three years old. She took readily to the work and was soon handy and trusty so far as I knew in every way.

She comes from Shire stock, on the Dams side, of good disposition. The sire is a Clydesdale and is of a good disposition.

We used this mare during the summer and was very pleased with her in every way but, we noticed a few times she put her ears back and showed some signs of being cross. Since winter come on and she has been idle we have found she is inclined to kick; she has kicked at the party handling her two or three times; especially when currying her.

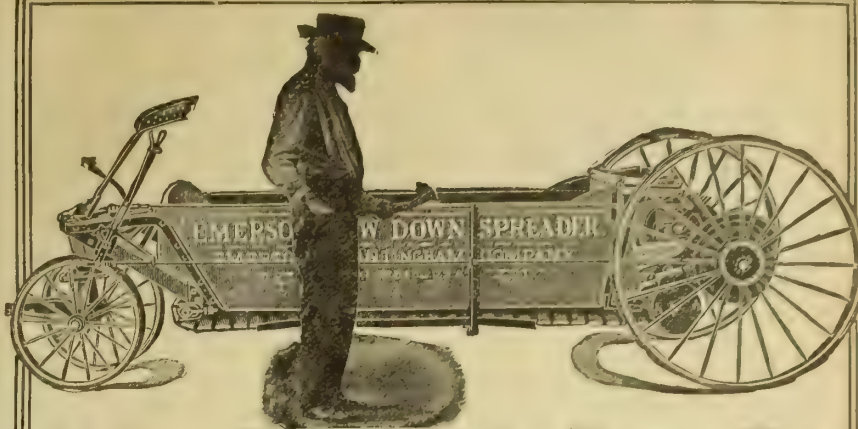
I have taken your most valuable paper since it first issued and shall be pleased if you can tell me how to break this mare from this fault.

Yours truly,

Subscriber.

Answered Dr. W. E. Carroll.

Frequently a young horse or mare may acquire the kicking habit merely, however, as a result of playfulness and lack of use. If, when you begin working the mare, she persists in the vice, you could arrange some means whereby she will inflict pain upon herself each time she attempts to kick, this will probably cure her. This might be done by arranging a rope fastened under her tail, going



## Makes It Twice As Easy—The EMERSON Low Down Spreader

NOW you need no longer waste energy lifting manure into the old-fashioned spreader with a box as high as a wagon. Just why the world has been content to waste all this energy all these years no one knows, but you don't have to do it any longer. The EMERSON Low Down Spreader reduces the work at least 50 per cent—there is no lost motion. Loading from either side or rear, you lift your forkfuls only a little over half as high as with the old-fashioned spreader—and it's the last half that takes the most muscle.

Point by point, feature by feature, the EMERSON is as far ahead of other spreaders as the low down principle is ahead of the old style. Let us prove it to you. Send your name for our new booklet of facts. Read why the EMERSON Low Down is

### Easy to Operate, Easy to Load, Easy to Unload, Easy Running

Beater is all metal, can't warp, split, rot or check. Teeth are square steel, chisel pointed, set in spiral form—so they cut, tear, shred and pulverize all the manure and spread it evenly regardless of how bed is loaded.

Endless apron—each slat runs on its own wheel—not dragged over stationary rollers. Worm gear drive runs in bath of oil. Foot lever controls driving mechanism—hand lever changes quantity spread.

Main drive wheels 50 inches high—main frame sills are steel channels 3 inches wide, 5 pounds to the foot. The EMERSON Low Down is practically an all steel spreader—the only parts not steel are—apron slats, box sides, pole and whippetrees.

You should know more about the EMERSON before you select any spreader. Call at our store and we will be pleased to show it to you. 31456

MILLER-CAHOON COMPANY

Murray, Utah.

Idaho Falls, Idaho.

## FIELD PEAS

Live planters here in the Mountain States are devoting larger acreages every year to this profitable crop.

P-W's Canada Field Pea is without a successful rival both as to yield and quality. While our present stock is large yet orders are coming fast. Better reserve your needs at once.

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TREES. Thousands. We sell direct, save 50 per cent. Write for Planters Catalog and Prices. (No Agents) 25 years in business.—Carlton Nursery Co., Carlton, Oregon.

around in front of her, through a collar or rope and tied back to her hind feet. Or tie a rope from the halter to her hind feet long enough so that she can eat well but as she extends her leg to kick the pull will come on her nose.

Watch the roof leaks. A patch now may save further destruction and save some feed.

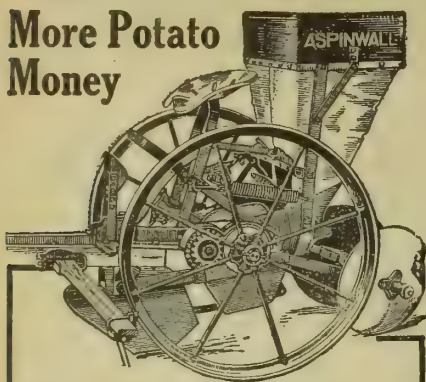
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American  
FULLY GUARANTEED  
CREAM  
SEPARATOR

A SOLID PROPOSITION to send new, well made, easy running, perfect skimming separator for \$15.00. Skims warm or cold milk, making heavy or light cream. Bowl is a sanitary marvel; easily cleaned.

ABSOLUTELY ON APPROVAL  
Different from picture, which illustrates our large, heavy-duty model. Western orders filled from western points. Whether dairy is large or small write for handsome free catalog. Address:  
AMERICAN SEPARATOR CO.  
Box 4098 Bainbridge, N. Y.



## More Potato Money



### Grow Potatoes this Year

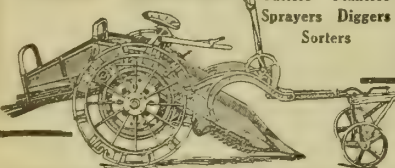
**PUT** in a big acreage. Make more out of potatoes than out of grain—200 bushels to the acre is not uncommon. An Aspinwall one-man planter plants 5 to 8 acres a day. Plants at uniform depth and spacing—uniform planting means biggest yield. Machine opens furrow, drops seed—any size—any distance—covers, marks next row, and if desired, sows fertilizer all in one operation.

Manufactured by the World's Oldest and Largest Potato Machinery Makers. 60,000 Aspinwall Planters in use. Take no chances on unproven machines. Learn all about the

#### Aspinwall Potato Digger

with Agitating Rear Rack, with or without Vine Separator. Gets all the potatoes clean. Depth of digging regulated by handy lever. Side Hill Lugs and Wheel Bands furnished free. Light draft, bronze bearings. Made in three styles, meets all soil conditions. Write for free catalog on Potato Machinery and ask questions on potato growing. Write today.

ASPINWALL MFG. CO.  
520 Sabin St. Jackson, Mich.



## Popular Potato Planter

AT A

#### POPULAR PRICE

With the great variety of sizes of pieces used for potato seed it has been found impossible to design MACHINERY to do anything like accurate work in dropping the seed at the desired distances and to deliver each and every piece into the ground uninjured and certain to sprout.

With a KEYSTONE Hand-Drop Planter this uncertainty has been entirely overcome and with this machine there is neither waste of expensive seed nor high-priced land. Strong, durable, simple; it is the ideal machine for the practical potato farmer.

Send for Catalog  
A. J. PLATT, MFG. Sterling, Ill.  
**MILLER-CAHOON CO.**

General Agents  
Idaho Falls, Idaho—Murray, Utah.

Mention Utah Farmer when you write.

### HOW TO MAKE TEN ACRES PAY. (Continued from page 3)

Income	
Farm cows, net.....	\$350.00
Hens, net.....	100.00
Hogs, net.....	394.80
Beets 4 acres @ \$65.....	260.00
Alfalfa 16 tons @ \$7.00 per ton	128.00

\$1232.80

In the Richmond-Lewiston-Cow-Testing Contest, covering a period of three years, records of 529 cows were kept. After paying for the feed the following results were secured. One of the cows averaged over \$100 a year; 23 or 4.54 per cent averaged between \$75 and \$100; 125 or 23.63 per cent averaged between \$50 and \$75; 261 or 49.34 per cent averaged between \$25 and \$50; 109 or 20.61 per cent averaged between \$0 and \$25; and 9 or 1.7 per cent were kept at a loss.

By using judgment in buying my grade cows, and knowing the characteristics of good producers, I see no reason why my cows should not bring me in on an average of \$35 each a year. By careful breeding and selection my herd should be improved in eight or nine years so that each cow would bring in \$75 thus increasing my income considerably.

It costs somewhere near \$15 to keep a brood sow one year. My five sows should average at least five pigs to the litter and should have two litters a year. This is not a high estimate because the average sow has about eight pigs to the litter, but of course a number would die before the market is reached. According to these figures I should be able to market forty hogs every year. The prices received will vary so that some years I may make small profits but will average about five or five one-half cents a pound, live weight. When hogs are selling at 4½ cents, live weight, \$20.45 is realized per ton for grain feed, consisting of mixed barley, oats, wheat and bran, and 20 cents a hundred pounds for skim milk. If they sell for 5 cents the price received for grain is \$23.87; at 5½ cents it is \$27.29; at 6 cents it is \$30.71 and at 6½ cents it amounts to \$34.14.

These prices were taken from a test of 296 hogs. By taking advantages of the low price of grain in the fall I can purchase my feed at \$18 a ton.

A farmer must be somewhat of a business man and must study the markets. If his hogs are in good condition for the market he will establish a steady trade, in a few years, where he is sure of disposing of his herd. He should be able to build up a business and make his name bring a higher price for his produce, because of superior quality, just as J. B. Stetson makes us pay \$2 for his name on our hats.

By building up my business I ought to be able to sell my hogs at an average of 5½c which would mean that I receive \$27.29 a ton for the grain fed. It cost me \$18 so that there would be a net gain of \$9.87 a hog. Forty hogs would net me \$394.87.

Pure-bred chickens should net me \$1 each a year, and by keeping one hundred I should clear \$100 on my poultry. The initial cost on them would be about \$110 as stated in my expenses.

By having alfalfa in four acres of my land and sugar beets in the re-

## Get the Grain in Right



**Empire Jr.,  
Hoosier,  
and  
Kentucky  
Grain Drills**



**BEGIN** this season to put in your grain with an Empire Jr., Hoosier, or Kentucky drill. It's the best and safest way to plant.

No matter whether the ground is hard or soft, gravel or clay, smooth or rough, level or hilly, there is an Empire Jr., Hoosier, or Kentucky drill that will plant your seed as it should be planted.

The value of drilling in the seed shows at market time. The grain grades higher and brings a better price. There is more of it, and that again gives you more money. An Empire Jr., Hoosier, or Kentucky drill has a remarkable effect on net profits.

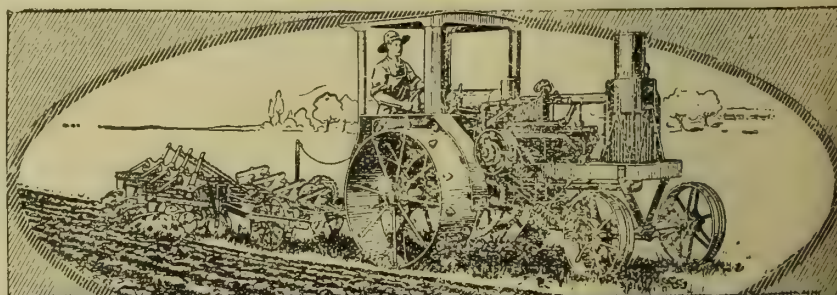
For any soil and for any seed, from alfalfa and grass seed up to the size of beans, sown with or without fertilizer, buy and use an Empire Jr., Hoosier, or Kentucky drill. Do that, and you can't go wrong.

Sold by IHC local dealers everywhere, who will give you any information you need to buy the best drill for your work, or, write us for catalogues.

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(INCORPORATED)

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San Francisco, Cal. Spokane, Wash. Salt Lake City, Utah



### FARM WITH A TRACTOR AND FINISH ON TIME.

The reason why tractor farming is proving so successful is that with a tractor you can do your work when it should be done at just the right time.

An Avery tractor plowing outfit gives you a lot of power so concentrated that one man or boy can operate it. It also furnishes you power which weather conditions cannot stop and power that will work as long as you want to run it—day and night if you desire.

In getting a tractor investigate all the facts about two things—the construction of the tractor itself and the Company that builds it. Avery tractors are built right. They have low speed, strong opposed motors with cylinders having removable inner walls. They also have a special sliding frame transmission, with straight spur gears. They have two speeds each speed a direct drive. Furthermore, they are strongly guaranteed by a company owning its own large factory and many branch houses.

Ask for a copy of the 1916 Avery catalogue.

8-16 H. P. Avery Tractor...\$ 825 | 25-50 H. P. Avery Tractor \$2360  
12-25 H. P. Avery Tractor 1240 | 40-80 H. P. Avery Tractor 2698  
20-35 H. P. Avery Tractor 1870 | Prices f. o. b. Salt Lake City.

LANDES & COMPANY,

Corner 2nd West and So. Temple St., Salt Lake City, Utah.

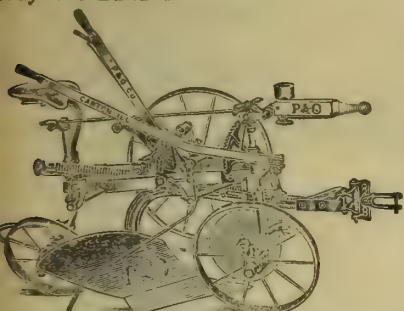
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One Man Outfits 6 Sizes Fit Any Size Farm



# P & O Diamond Sulky Plows

Made right or left hand, all standard sizes, all styles of bottoms, to meet local requirements. For 18 years the leading riding plow in this country. "It's the Way We Build Them."



High lift, light draft, automatic control and perfect bottom. Removable dust proof wheel boxes with hard oil screw caps. Beam is high in the throat, giving ample clearance in deep plowing. Double rails hold plow steady and rigid, making it run absolutely true and leaving a smooth, level furrow bottom. Only truly automatic rear wheel control ever put on a plow; holds rear wheel rigid regardless of ordinary weaving of team, but allows it to castor naturally on the turn, making a square turn possible.

Collars and lynch pins inside the screw caps take end thrust off of boxes. Bottom so hung in frame as to throw weight of plow, dirt and driver all on wheels, insuring light draft. Spring washers prevent nuts from working loose. High grade coulters with chilled cone take-up bearings, and quick adjustable clamp.

Powerful foot lift. Hitch adjustable without removing bolts or pins. Bottom is built on a double ribbed malleable frog, the strongest made; strong in the bend where steel frogs are weak. Different types of P & O bottoms interchangeable. P & O Diamond Plows have every convenience and adjustment for the performance of perfect plowing.

UTAH IMPLEMENT VEHICLE CO.

Sales Agents  
Salt Lake City, Utah.

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An insecticide and disinfectant for  
**Cattle, Sheep, Hogs,  
Horses and Poultry**  
45c qt., 75c half gal.,  
\$1.25 gal., delivered.  
**CALCO**  
Stock Conditioner  
Keeps stock healthy  
and thriving.

**CALCO HEALING POWDER** heals  
saddle and collar galls, barb wire  
cuts, etc. Keeps flies flying.  
Send in your order.

**CALLISTER-KORTH CO.**  
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**Big Money in Running Water**  
Let us start you in a business that will make you from \$15 to \$50 a day when farm work is slack. Other men have done it for years with an  
**Improved Powers Combined Well Boring and Drilling Machine**  
Same rig bores through any soil at rate of 100 ft. in 10 hours, and drills through rock. One team hauls and operates machine. Engine power if wanted. Easy to operate—no experts needed.  
Small investment; easy terms. Make machine pay for itself in a few weeks work.  
There is a big demand for well-boring water, oil, and gas rigs. Write for free illustrated circular, latest machine designs, and list of dealers.  
**List Manufacturing Co.**  
Box 978 Clarinda, Iowa

maintaining four, a good rotation system could be practiced which would increase the fertility of the soil. The manure from the barn-yard could be put to the very best of use on the beet land. Care of manure must be emphasized as the average farmer does not sense the value of it. It is the one thing which will spell success or failure on this ten acre farm.

Beets should average 18 tons an acre and should net me \$65 per acre.

Alfalfa should produce four tons an acre which should sell for \$8 per ton. Of course I shall not sell my hay but will charge it to the cows and horses.

With the assistance of one small boy who is able to help with the milking one man should be able to do all of the work on this farm and still have leisure time to study, from books and magazines, the methods used in other localities where farming is a paying business.

The interest on the \$1600 mortgage will amount to \$96 a year at six per cent. By valuing my farm at \$3000, interest at 4 per cent will amount to \$120. By subtracting this from the amount which my farm brings in and allowing \$500 for family expenses I shall have \$516.80 to pay in redeeming my much dreaded mortgage. In three years my farm and all that goes with it will be my own and a neat little sum shall be laid aside each year, from then on, for old age which comes but slowly to the man who is working continually with nature.

I leave the question to you: "Have I made ten acres Pay."

## QUESTIONS AND ANSWERS.

Utah Farmer:

Will you kindly answer, which of the following trees are best for timber such as could be used in repair work on the farm, Mulberry, White Ash, Black Walnut, Black Locust, or Honey Locust? And what is the best way to season the wood?

I thank you in advance for the information.

Accept my best wishes for the success of the Utah Farmer.

Respectfully,

W. Longhurst.

Answer.

The ash would probably serve all purposes best, but as there are so many different uses to which a wood might be put on a farm, a short description of each of the woods mentioned might make it easier to choose the wood best suited for the particular purpose.

**Mulberry.** Wood moderately heavy hard, strong, rather tough, coarse texture. It shrinks and checks considerably in drying, works and stands well. Use in co-operation, ship building, and in the manufacture of farm implements.

**Ash.** Wood heavy, hard, strong, stiff, quite tough, not durable in contact with soil, straight grained, rough on the split surface and coarse in texture. The wood shrinks moderately, seasons with little injury and takes a good polish. In carpentry ash is used for finishing lumber, stairways, panels. It is used in shipbuilding, in the construction of cars, wagons, carriages, for barrels, tool handles, oars and hoops.

**Black Walnut.** Wood is heavy, strong, hard, of coarse texture. The wood shrinks moderately in drying, works and stands well and takes a good polish. It is a favorite wood for

# Heating Pipes Are Needless

(Copyright 1915 by The Monitor Stove & Range Co.)

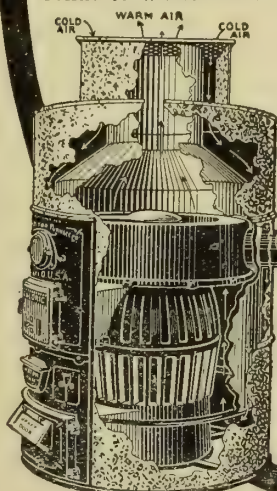
When you fit your house with the Caloric pipeless furnace. It fits immediately under the floor and the warmed air from its single register circulates through the entire house.

You can install this furnace almost as easily as a stove and you do not have your cellar littered with a labyrinth of pipes. There being no pipes in the cellar this is the one furnace that will not spoil produce. The

(Patented) **PIPELESS CALORIC FURNACE** (Patented)

is designed on new principles and has desirable features that cannot be found elsewhere. It is guaranteed to save 35 per cent of your fuel. This great saving is effected by means of our ribbed firepot, and the fact that there are no pipes running through the house and cellar to waste heat. The ribs ad-

mit free air circulation which causes the coal to burn thoroughly. No clinkers to lose you money. These ribs prevent ashes from forming on the firepot and retarding heat radiation. The Caloric firepot has 600 square inches greater radiation than the average firepot.



## Install It Easily in Any House--Old or New

Nothing to do but cut one hole for a register. By digging a small pit you can even put the Caloric Pipeless Furnace in a house that has no cellar. It will burn coal, coke or wood. Bring city comforts to farm homes. Saves the labor of carrying fuel upstairs and ashes downstairs. The Caloric Pipeless Furnace lessens fire danger to house and children. It provides a healthful uniform heat for every room in the house.

### Our Strong Guarantee

to prove our confidence. If the Caloric Pipeless Furnace is not entirely satisfactory we'll make it so any time within one year. If there is no dealer in your town to demonstrate this furnace write us for illustrated catalog.

**The Monitor Stove & Range Co.,**  
336 Gest St., Cincinnati, O.



**American Fence and Steel Fence Posts**  
AWARDED  
PANAMA PACIFIC  
GRAND PRIZE  
INTERNATIONAL EXPOSITION  
Big, full gauge wires—full weight—full length rolls woven with a mechanically hinged joint. Superior quality galvanizing—proof against hot sun, sleet and snow.  
American Steel Fence Posts, cheaper than wood and more durable. Last a lifetime. Hold fence secure against all conditions.  
**Sent Free** Write for booklet on how to set posts and erect fence. Every farmer should have it.  
**Dealers Everywhere**  
**AMERICAN STEEL & WIRE COMPANY**  
Chicago New York Pittsburgh Cleveland Denver

cabinet work. It is now quite expensive and usually used only for veneer and gun stocks.

**Black Locust.** Wood very heavy and hard, strong and tough, very dur-

able in contact with soil, shrinks considerably and suffers in seasoning. Used for wagon hubs, for furniture and in manufacture of farm implements.



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True to its name for hard wear and quality.

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CONCRETE SEWER AND IRRIGATION PIPE.

They Grow Harder and Stronger With Age. All Other Pipes Decline.

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Salt Lake City, Utah.

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The above label is found on the neck of all apparel Temple Brand Garments. Be sure it is in the garment you buy.

If WE Insist Today

**Capells  
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YOU'LL Insist Tomorrow

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weight 6 pounds

Agents, A. B. Dick Mimeographs  
Addressing machines and all makes of typewriters.

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THEY HAVE A VITAL BEARING**

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CLAY  
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NONE BETTER MADE



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Not inferior goods, but

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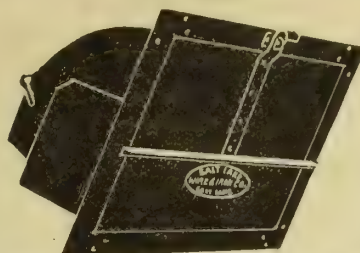


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Everything in Ornamental Iron and  
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There is nothing better.

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Brands That You Should Know  
FULLY—MEMORIZE THEM  
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HAT WILL APPEAR IN THIS PAGE EACH  
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ROYALLY MADE  
FOR A  
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What Are Your  
Printing Needs

Every farmer should pay  
more attention to his needs in  
printing. Those not acquainted  
with him judge him by the  
printed matter he sends out.  
Neatly printed Letterheads,  
Envelopes, Butter Wrappers,  
Advertising Circulars, etc.,  
add greatly to his influence and  
prestige.

What Are Your Needs?  
We are equipped and pre-  
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thing in that line at the lowest  
possible cost.

Send us your next job, or  
get our estimates.

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REGISTERED  
1873  
**VALVOLINE**  
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We Develop Any Size Roll 10¢  
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Larger Sizes At Equally Attractive Prices

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Write  
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Tents, Awnings, Wagon and  
Stock Covers, Camping Outfits,  
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Macaroni, Spaghetti and All "Queen's  
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WESTERN MACARONI  
MFG. COMPANY  
Salt Lake City, Utah.

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**STERLINE**

MADE IN UTAH  
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No Mercury  
No Ammonia  
No Gasoline  
Non Combustible  
Non Evaporative  
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**MERRILL-KEYSER  
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Buyers and  
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GRAIN PRODUCE, BAGS

SALT LAKE CITY

Ask for quotations.



## RELIABLE FARM BARGAINS

THIS IS THE BEST YEAR  
IN WESTERN FARMING.  
If you're ever going to buy  
a farm DO IT NOW!

36 acres of good farming land. House, barn and other outbuildings. City water, electric lights. Price only \$3500 on good reasonable terms.

160 acres near Elwood, Box Elder county. Located right on the main railroad line, and only quarter of a mile from station and beet dump. Abundance of water goes with the place. 8-room house, large barn, etc. Will sell all or part of this place. Only \$135 per acre on terms.

54 acres near Salt Lake City. 4-room brick house and good outbuildings. Ample water from Jordan canal. Land all under cultivation. This is some of the best farming land in the country. Five Jersey cows, two registered. Good team of horses; pigs, chickens, plow, wagon, and all necessary machinery to run the place. Only \$158 an acre, including everything. Good terms, or will trade for Salt Lake City property.

640-acre dry farm in Box Elder county, close to railroad. Small payment down and balance in 10 yearly payments. A bargain.

80 acres of good land in the Bear river valley. 4-room new frame house, 4 good horses, 2 sets harness, 1 wagon, 1 white top buggy, mower, rake and plow. This land has a full water right from the Bear River canal and is only one mile from town. The place is now rented for \$1440 cash each year. Price only \$165 per acre on good terms, or owner will trade for good city property.

We trade city homes for farms. Let us know if you want a farm or ranch, large or small. We will get it for you and guarantee satisfaction.

Phone NOW—Wasatch 963.

**KIMBALL & RICHARDS**

"Land Merchants."  
56 and 58 Main Street.  
Salt Lake City, Utah.

## Awarded Preference By Housewives

This is the highest possible award that can be given an article of food. In addition, Utah-Idaho Sugar has received the endorsement of the country's leading food experts and chemists, who claim that beet sugar is equal to any other refined sugar in the world.

Food and candy manufacturers, canners, et al, buy it by the carload. Housewives buy it by the sack.

It is the one pure, sweet, economical sugar of excellence, known as such to all discriminating housewives, who appreciate good things.

Ask your dealer for Utah-Idaho Sugar.

**UTAH-IDAHO SUGAR**  
ABSOLUTELY PURE

## HOME

### DRIED FRUIT

Carrie Pancoast.

### Proper Preparation Overcomes Popular Prejudice.

"I loathe, abhor, detest, despise, Abominate dried-apple pies,"

was written by someone who had not tasted the delicious dishes prepared from dried fruits by the modern housewife. I have only good words for the practice of modern canning, but insists that when properly prepared, dried fruits are both wholesome and toothsome, and are important sources of variety in the diet.

They should be thoroughly cleaned, washed, and soaked through the night. Next morning put the fruit and the water in which it was soaked on the stove, or into a fireless cooker. The cooking process should be such as will restore the water lost in evaporation, insure the tenderness of the fruit, and at the same time make it appear as nearly as possible like the fresh fruit. This requires long, slow cooking, but very little sugar.

If sugar is to be added at all, it should be put in when the cooking is almost done; otherwise it will tend to toughen and discolor the fruit. Prunes do not require any sugar at all, as the long, slow cooking restores their natural flavor and they are then sweet enough for most people, but the addition of a little lemon juice improves their palatability.

### COOKING LIMA BEANS.

Food Specialists Suggest Methods of Preparing the Dried and Canned Product.

Food experts have long been insisting upon the importance of dried beans, peas, cowpeas, and similar legumes, and in one form or another such foods are an accepted part of the diet in most families. In order that she may make the diet varied, it is to the housekeeper's advantage to know a number of good ways of serving such foods, and so the home economics experts of the department have made some suggestions based upon their studies of foods and their uses in the home.

Fresh green Lima beans when at their best have a delicate, spicy, or pungent flavor, which to some palates, at least, suggests curry, a fairly well-known (any grocer can get it) though not very common spice, which perhaps most familiar in such dishes as "curried lamb" or "curried veal." This suggested the possible use of curry as a seasoning for Lima beans, and the tests which have been made gave very satisfactory results with dried and canned as well as with fresh beans. When preparing dried Lima beans, soak them for an hour or two (or even longer), according to dryness, and cook until tender. Then add the curry powder (in the proportion of one-half teaspoonful (level) to each pound of dried beans) rubbed into a tablespoonful of butter and mixed with a few spoonfuls of hot water. Add salt and pepper to taste and cook slowly until the curry flavor is well distributed through the beans.

That the method can also be followed with good results in preparing canned Lima beans for the table is of interest to housekeepers as well as to the canning clubs organized as a part

## 2-in-1 Washing Machine



### WASHES, RINSES AND WRINGS

The 2-IN-1 interchangeable lid is a new feature in the washing machine business. You can rinse the clothes with the same power with which you wash them. SAVES ONE-HALF THE TIME AND LABOR.

The 2-IN-2 wringer swings into four positions. The rollers have the forward and backward motion as well as the swinging. The whole operation is controlled by one lever.

The lid can be removed from the washing machine and placed on rinsing tub as shown in the right hand illustration above, and the clothes thoroughly rinsed by the washing dolly. This not only insures a good job of rinsing but REMOVES THE LAST BIT OF DRUDGERY FROM THE FAMILY WASHING. The simplest constructed machine on the market. Equipped for gasoline engine and electricity.

Write for catalogue.

Mailed Free.

**S. E. SCHROEDER MFG. CO., Minier, Illinois**

### Profit Makers

AGLANCE at Government reports shows how great a factor potatoes are becoming in Middle West production. Growers know that modern tools are necessary for satisfactory profit. Last year's crop is nearly 60 million short. Seed will be scarce and high. We have a Potato Planter that puts one piece in each place and one only.

### IRON AGE

Potato machinery, garden tools, spraying machinery, etc., are built to give profit making service. Almost any combination you can think of in each line. Eighty years of factory and farm experience behind their manufacture.

Ask your dealer to show them and write us for our representatives: Utah Implement-Vehicle Co., Salt Lake City, for separate booklets fully describing lines in which you are interested.

**Bateman Mfg Co. Box 836 Grenloch, N.J.**



**UTAH IMPLEMENT-VEHICLE CO., SALT LAKE CITY, UTAH.**  
Agents and Distributors for the Iron Age Goods.

OPENED JAN. 1ST, 1913



"The HOTEL that's BEST  
In all the WEST"

WHEN IN LOS ANGELES  
STOP at the NEW  
FIRE PROOF  
**HOTEL NORTHERN**  
EUROPEAN  
200 OUTSIDE ROOMS  
150 WITH BATH  
420 W. 2ND ST. NEAR HILL  
NORTHERN HOTEL CO., PROP.  
FRANK L. CRAMPTON, MGR.  
RATES \$1.00 PER DAY AND UP



# Are You Satisfied

with your Work Shirts?

Then why don't you try **Scowcroft's Maderite-Coat Style Work Shirt?** It has a bunch of improvements designed to overcome all the "Kicks" you have ever made with Work Shirts. You've really got to wear the "Maderite" to realize how a Work Shirt should be made to give the maximum service and satisfaction.

Insist on your dealer showing you Scowcroft's "Maderite" Work Shirts.

**JNO. SCOWCROFT'S and SONS CO.**

Manufacturers.  
Ogden, Utah.

of the department work and for whom some special studies of the use of canned vegetables have been undertaken. In this case, as with dried beans the amount of curry powder should be just sufficient to give a delicate flavor. A quarter of a teaspoonful (level) is sufficient for a quart can of beans.

For variety a little onion may be used, with or without curry. Cut the onion very fine, cook it in a covered stewpan with a little butter and a few tablespoonfuls of water until it is tender, and then add to the beans.

Another good combination is canned Lima beans with pimientos or sweet peppers, with or without the addition of the finely chopped onion, cooked until it is tender. The pimientos, because of their red color, add to the attractiveness of the dish as well as the flavor. One-half of a good-sized pepper, cut into small pieces, is sufficient for a quart can of beans. Stir into the beans and cook with them long enough to distribute the flavor through the beans.

## WOMAN IN THE NEW COUNTRY LIFE

Sir Horace Plunkett.

In the more intelligent scheme of the new country life, the economic position of woman is likely to be one of high importance. She enters largely into all three parts of our program—better farming, better business, better living. In the development of higher farming, for instance, she is better fitted than the more muscular but less patient animal, man, to carry on with care that work of milk records, egg records, etc., which underlies the selection on scientific lines of the more productive strains of cattle and poultry. And this kind of work is wanted in the study not only of animal, but also of plant life.

Again, in the sphere of better business, the housekeeping faculty of woman is an important asset, since a good system of farm accounts is one of the most valuable aids to successful farming. But it is, of course, in the third part of the program—better living—that woman's greatest opportunity lies. The woman makes the home life of the nation. But she desires also social life, and where she has the chance she develops it. Here it is that the establishment of the co-operative society, or union, gives an opening and a range of conditions in which the social usefulness of woman makes itself quickly felt. I do not think that I am laying too much stress on this matter, because the pleasures, the interests and the duties of society, properly so called—that is, the state living on friendly terms with our neighbors—are always more central and important in the life of a woman than a man. The man needs them, too, for without them he becomes a mere machine for making money, but the woman, deprived of them, tends to become a mere drudge. The new rural society economy (which implies a denser population occupying smaller holdings) must therefore include a generous provision for all those forms of social intercourse which specially appeal to women. The women's sections of the granges have done a great deal of useful work in this direction; we need a more general and complete application of the principles on which they act.

What boot-wearers—like yourself—are saying about the famous molded

## Goodrich "HIPRESS" Rubber Boots and Shoes

We've told you of the wonderful new "HIPRESS" process and how it makes possible **SO MUCH MORE WEAR AND COMFORT.**

NOW we're going to give you specific instances of their superiority—not what WE THINK they will do, but WHAT THEY ARE DOING.

Bob Gray, up in New River Station, N. B., Canada, wrote us recently about a pair of "HIPRESS."

Said they were worth their weight in gold—never played him a dirty trick—no sore, tired feet—always dry. Said that 3500 miles would be a conservative estimate of the walking he had done in the boots, much of it over rough ground, and still he couldn't wear them out! Now, this is the sort of things "HIPRESS" is doing everywhere—it has set a NEW STANDARD OF BOOT AND SHOE WEAR!

"HIPRESS" rubber boots and shoes are made by a new process—the same tough, gristly rubber that goes into Goodrich Auto Tires is used, MOLDED INTO ONE SOLID PIECE! Faults of handwork eliminated—they won't leak, peel or come apart—they'll outwear any other made. The genuine has the RED LINE ROUND THE TOP.

**The B. F. Goodrich Company**  
AKRON, OHIO

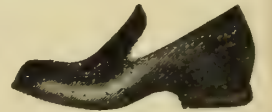
Makers of the Celebrated Goodrich Automobile Tires—"Best in the Long Run"



When you buy Rubber Overshoes insist on the genuine Goodrich-made

## "STRAIGHT-LINE"

for best fit—longest wear



## ROWE'S HOG OILER

New Idea  
Only Oiler made without valves, cylinders or wheels. Can't clog, stick, leak or get out of order. Guaranteed 3 years. Use crude or Medicated oil. Kills Lice; keeps pens and yards disinfected. One Oiler cares for 30 to 50 hogs. \$9.50 delivered.

**CALKO HOG POWDERS**  
is a Hog conditioner and Worm expeller. 25 lbs., \$2.00.  
**HEALTHY HOGS MORE PROFITS**  
Catalog Sent Free.  
**CALLISTER-NORTH CO.**  
McIntyre Bldg. Salt Lake City, Utah

## Experts Endorse Beet Sugar

Not only have government experts and scientists declared that beet sugar, highly refined, is the same, chemically, as cane sugar, but the greatest cooks and bakers have also added their endorsement of Table and Preserving Sugar, made from western-grown beets.

**AMALGAMATED SUGAR CO.**

Now is the time to renew your subscription to the Utah Farmer.

## The Thrifty Farmer

is now making arrangements for his

**ALFALFA, CLOVER  
GRASS SEEDS  
FIELD SEEDS  
GARDEN SEEDS**

Order your supply now while stocks are complete.

Prices will be higher later.

**BAILEY & SONS CO.**  
RELIABLE SEEDSMEN Est. 1865  
**SALT LAKE CITY, UTAH**



## Questions and Answers

Twin Falls, Utah Farmer:

Will English walnuts grow as far north as Twin Falls tract in Idaho?

Answered by Prof. W. H. Homer, Jr.

Can give no information from experience on the growing of English walnuts in that climate, but judging from our experiences in Utah would say that it is very doubtful that English walnut trees could be profitably grown in that section. The northern limit for the successful growth of the English walnut in this state seems to be in Boxelder County. The English walnut trees have been planted at various times in the different localities in Cache County but in nearly every instance they have winterkilled. These trees, however, are growing and producing crops of fruit in Boxelder, Weber, Davis, Salt Lake and Utah counties as well as in the southern part of the state.

McCammon, Idaho.

Utah Farmer:

Dear Sir:—I am going to breed ten sows—pure-bred Duroc Jersey, and have them come in the first of May, and pasture them on growing grain until my 15 acres of peas are ready to turn the pigs into. Do you think this would be enough peas to fatten 70 head of pigs? I am not going to feed them any grain while on pasture. Peas will be ready July 10th or 15th. Do you think my plan will carry out, and what do you think pigs will be worth next fall?

J. A. Ray.

Answered by Dr. W. E. Carroll.

Fifteen acres of peas should be sufficient to maintain 70 head of spring pigs. There may be some difficulty experienced, however, in getting the pigs in a fat condition on this pas-

ture alone. If the animals do not fatten as readily as they should, a grain allowance of from one to three pounds per 100 pounds live weight could be supplied them.

### SPINAL MENINGITIS—WORMS.

Riverside, Utah.

Utah Farmer:

Gentlemen:—I have a five-year-old unbroke horse that is afflicted some way in his locomotion. Principally, I think in his hind parts. He finds it difficult to turn quick. He is very awkward generally, though much better than at first, which was about two years ago. Can you suggest any thing that might straighten him up. The same horse has worms. What can I feed him for them? Thanking you.

E. H. Welling.

Answered by Dr. H. J. Frederick.

1. From your description it is evident that your animal's spine must be affected in some way. This sometimes happens as a result of an injury and at other times as the result of some forage eaten, causing what we commonly know as Spinal Meningitis. Animals affected with this trouble usually lose control of their locomotory apparatus. Where a condition of this kind has been running on for a length of time—as you state—it is not probable that it will be readily overcome. However, this being a young animal, there may be a chance for it to gradually grow out of the condition. We sometimes use Potassium Iodide and Nux Vomica on the onset of this trouble.

2. Worms: Where an animal is affected with worms I would advise fasting him for from twelve to twenty hours, then giving him about two ounces of turpentine in a pint of raw

linseed oil. This is for an animal weighing from 100 to 1200 pounds. This is followed in about eight or ten hours with about a quart of raw linseed oil or a pound of epsom salts. This may be repeated a number of days if necessary.

### RING BONE

Hatch, Idaho.

Gentlemen:—I have a horse with what appears to me to be a ring bone it looks like a swelling or growth just above the hoof on the first ankle. Joint is hard and very tender. Animal is almost unable to walk. Could you give any advice in regards to a remedy? Please answer through your paper. Thanking you for your kindness in the past I remain.

Yours truly, Clarence Sorenson.

Answered by Dr. H. J. Frederick.

Ringbone: Where an animal is affected with ringbone it is first necessary to give it absolute rest. On the onset we very often blister the part severely for a number of times, and if this does not overcome the trouble, firing is necessary. Where the growth has enlarged on the leg and is hard the firing operation would probably be the only thing that would do any good. This, however, should only be applied by one who understands the operation. I would advise calling in a competent veterinarian to do this work for you.

### THE SEED BED FOR OATS.

Oats usually follow a cultivated crop such as corn or potatoes; hence it is not generally necessary to plow the land before sowing. Oats do well on fall-plowed land, but if the land has not been plowed in the fall better yields are usually produced from sowing in a seed bed made by disking and harrowing than in one made by spring plowing. Early seeding for oats is very desirable. As a good seed bed can be made much more quickly with the disk harrow than with the plow on land that was in a cultivated crop last year, the saving in time is an advantage. Two diskings and one harrowing with the spike-toothed harrow will put clean land in good shape for sowing with the drill.

Oats grow best in a seed bed that has 2 or 3 inches of loose surface soil, but which is firm below that depth. This is another reason why disking is to be preferred to spring plowing, for there is not time for plowed land to settle before the seed is sown. Still another reason why the disk is better is that a field can it can be plowed, and the cheaper way of doing a job should always be chosen if it gives just as good results as the more expensive way.

### AT THE LOGAN ROUND-UP.

The most unique feature of the Round-up was the morning work done by the attendants in the laboratories and class rooms where each does individual work and is free to ask any questions at any time. Following is a list of attendants at each class which shows how popular the work is: Veterinary practices, 109; Grain and potato diseases, 59; Automobiles, 30; Poultry, 35; Blacksmithing, 20; Butter-making, 11; Race betterment, 30; Greenhouse, 30; Methods of teaching Home Economics, 53; Domestic Science and Arts, 35; House decoration, 10.

## Caterpillars Do The Work

PACIFIC LAND & WATER COMPANY,

Utah and Idaho Lands.

Salt Lake City Utah.

January 22, 1916.

Consolidated Wagon and Machine Co.  
City.

Attention Mr. H. T. Johnson

Gentlemen:

As you are aware we have been, during the past season, using a Caterpillar "60," and a Caterpillar "75."

I am sure you will be pleased to know that we have met with perfect success; the machines operate perfectly; there have been no repairs, consequently no delays. During the month of September we ran both engines 22 hours a day, stopping only to grease and oil.

We find the engines work perfectly in every place we have put them. For clearing brush they cannot be equalled and on ground that has been previously plowed they are a perfect success. The ground is not packed or in any way injured by them traveling over it.

Last season we operated two large tractors with the round wheels but were unable to operate them profitably. It seemed then as if we were either stuck in a ditch, broken through a bridge or something of the kind almost daily.

You will be interested to know that we cleared, plowed and planted over 7,000 acres during the season and all of the ground was plowed twice. The burning question with us today is "How did we ever farm without a Caterpillar?" If you care to bring your prospective customers to Park Valley where you can see our engines in operation, I am quite sure you will have no difficulty in convincing them that the Holt Caterpillar is what they must have to farm successfully.

Yours very truly,

PACIFIC LAND and WATER COMPANY,

By H. A. LaFont.

Manager.

## Preparedness!



A big Army and Navy is vital to the welfare of the Nation. Simplex Ford Auto Oil is just as vital to the welfare of your Ford car.

**SIMPLEX**  
**"FORD"**  
SPECIAL  
**AVTO OIL**

it will be victorious in all battles with "Friction." Made especially for Ford Automobiles and refined to suit Western conditions. "Every Drop Counts."

**Utah Oil Refining Co.**

Refiners

Salt Lake City, Utah.



**Barteldes**  
**Sweet**  
**Clover**

Genuine White Blossom

Will grow on the poorest and most barren soil. Will improve run down badly washed fields. New crop of hulled seed. Cleaned and tested for high germination.

SAMPLE and Big New Catalog FREE. Also Alfalfa, Red Clover. White and Crimson Clover. Our Pink List gives market quotations and lowest prices. Write for it.

Books Free With \$5 Orders

Choice of two well bound volumes of ready reference, either the Barteldes Farm Guide or Cook Book, free with \$5.00 orders.

**BARTELDES, SEED CO.,**

875 West Main Street, Oklahoma City, Oklahoma  
855 Sixteenth Street, - - - Denver, Colorado.

## 13 HOME BRED

Registered Percheron Stallions

Buy home bred, climated stallions as cheap as eastern horses. Quality considered.

Organize your own companies, if you desire, and have a representative come and see the animals. I will not organize any companies to sell them. Horses will be sold so that individuals can buy them. Positive guarantee that as good animals can be bought here for the same price that horses of the same quality can be bought in the East.

Also offer for sale two or three pair of matched teams of registered mares. Best foundation stock that can be bought. Some of my mares costing me over one thousand dollars.

Also have for sale 300 choice registered Rambouillet Rams and 300 registered Rambouillet yearling ewes.

**ACME STOCK FARMS**

W. S. HANSON, Prop.

Collingston

Utah

One Registered Guernsey Bull, ready for service. J. J. Blum, Stayton, Oregon.



**2 STALLIONS FOR SALE**

One Percheron, dark brown, weight 1900; 8 years in March.

One, German Coach, seal brown, weight 1600. Both imported and registered. Will trade for horses, cattle, or cash.

ROY FORSGREN, Brigham City, Utah.

**CHOICE CANADA PEAS.**

I have about one and one half tons of choice Canada Peas grown from hand picked selected seed. In 100 pounds lots or more \$4.00 per hundred f. o. b. cars at Collinston, Utah.

ACME STOCK FARMS

W. S. HANSON, Prop.

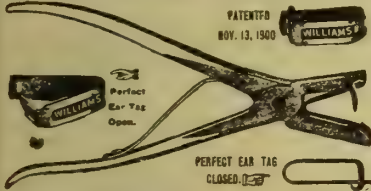
Collinston

Utah

**"PERFECT" Identification**

For Cattle, Sheep Swine, Etc.

There can never be any question about ownership, when an animal shows a "PERFECT" EAR TAG, with number of animal and name and address of owner stamped thereon and any owner who neglects to so identify his stock, has no one to blame for losses except himself. The return of one good steer will pay for "Perfectly" tagging 2,000 head.



The "PERFECT" TAG should be used because it is the lightest tag manufactured; made of aluminum; non-corrosive and non-poisonous. It can be attached to an animal's ear instantaneously, in one operation. No danger of squeezing the ear or causing inflammation. This ear tag is endorsed by stockmen all over the United States.

Send for FREE Sample Tag and Prices today.

SALT LAKE STAMP CO.  
Salt Lake City, Utah.

**HOW WE PRODUCE OUR****SEED POTATOES**

We, like other seed houses, have had considerable trouble to find suitable seed potatoes, stock we could recommend free from disease and which would be of special merit as to reproducing itself and we made up our minds to offer our customers stock that is true to type, color and size.

The Government has established a station for the production of pure, clean and suitable seed potatoes at Jerome, Idaho. A visit to the station convinced us that they had some clean stock which we wanted and we bought what they could spare, planted them on new sage-brush ground, watering them once, dried them up the latter part of July and harvested them the middle of October and got a yield of 40 bags per acre, none larger than hen eggs. Now we have a stock as firm as rocks, perfect in type and absolutely free from disease. We planted 45 acres of this seed stock on old alfalfa ground and produced 260 bags per acre. We also selected three varieties and sent them to the National Potato Show at Michigan and were awarded the first prize on each.

If you want potatoes of special merit, potatoes that will make you money, write us.

VOGELER SEED CO.  
Salt Lake City, Utah.

**A REVIEW OF THE UTAH COUNTY WORK FOR 1915.**

One thousand one farm visits were made by the Utah County Agent Mr. A. B. Ballantyne during the year just past. These varied in length from one-half to eight hours, and at each one some definite piece of work was accomplished.

Ninety-one meetings were held having an attendance of four thousand fifty-nine persons, so that during the year about one-fourth of the population of the County were reached by the Agent.

Eleven seed-treating demonstrations were held, at which eight hundred seventy-two persons were given instructions as to the life history and measures for the control of the different smuts of grains and the three common diseases of potatoes.

In the oat fields where the seed was treated according to the directions given at these demonstrations, the loss from smut was less than two per cent, while the adjoining fields and those generally over the County showed an average loss of twenty-two per cent from this cause. Using the yield and acreage as given in the 1910 Census, and valuing the oats at fifty cents per bushel, Utah County lost from preventable oat smut \$36,414.00. This loss which can be almost prevented at a cost of two cents per acre, would pay Utah County's share of the expense incurred in the County Agent work for over forty-five years.

One hundred eleven persons followed wholly or in part the instructions given for the control of potatoes diseases. The farms reporting showed an increase in yield on the areas from treated seed of an average of on hundred twelve bushels, over the areas from seed not treated.

The most important endeavor of the year however, has been the effort to organize the Utah County Farm Bureau. This is patterned after the successful ones of its kind in the eastern and in the western states. This organization will assist in planning and in the execution of the county-wide campaigns of the County Agent, and will be directly responsible for carrying them to the people.

The basis of this organization is a series of Local Centers distributed over the County wherever a group of farmers are interested and are large enough to master the minimum membership of twenty persons. These locals will be kept in touch with each other by means of a County Board composed of representatives from the respective locals. This Board will meet monthly to consider the campaigns as they develop.

To January 1st, twenty-seven meetings have been held having in attendance five hundred six farmers. Five locals with a membership of one hundred forty-nine had been organized. Three others had a subscribed membership of thirty-seven. It is expected that fifteen locals will be fully organized by March 4th, the date set for the County meeting.

**PLAN YARD PLANTING NOW**

H. F. Major.

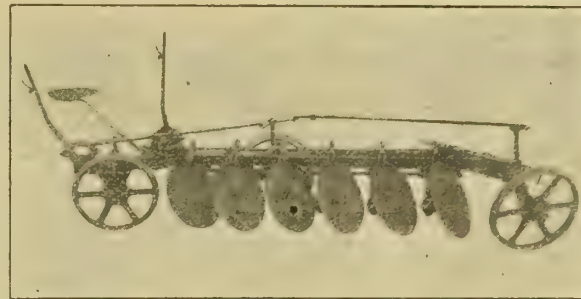
Late winter and early spring furnish the best opportunities for planning to make improvements in farm-homes surroundings and to plant shrubs. Probably bridalwreath, or Spirea VanHouttei, has proved satisfactory to more people than any

**HEWLETT'S LUNETA BAKING POWDER**

25 CENTS the Pound, why pay more?

The best at any price, and the price is only twenty-five cents for a big pound tin. No other baking powder will raise nicer, lighter biscuits, cakes and pastry. None more pure, none more wholesome.

Order from YOUR Grocer.



DAVIS HOWE & COMPANY,  
Salt Lake City, Utah

September 27th, 1915.

GENTLEMEN:—After using your Howe Weeder and Summer Fallow machine sixty days, we are pleased to say it has saved us at least \$150.00 already in our weeding work. It does double the work we were doing before with one man and five horses, and does it better. It is by far the most successful machine for cutting out weeds and doing summer fallow work we have ever used, and we take great pleasure in recommending this machine to try farmers as the best tool for this work we have ever seen.

Very truly yours,  
Mgr. Fort Harriman Land and Live Stock Co.  
R F D No 1  
Riverton, Utah

J. W. GRACE,

Live Stock Co.

**THE HOWE WEEDER**

with the same horse power is guaranteed to do two times more work and do it better than any other machine now used for cutting out weeds and summer fallowing dry farm land. Dry farmers cannot afford to be without these machines a single season. Order early as we cannot promise prompt delivery on late orders.

Best of reference.  
**DAVIS, HOWE & CO.**  
Salt Lake City, Utah

other single yard ornament and it may well be included in the order which it is about time to send to the nurseries, if a neighbor cannot supply what you want. The common name "bridalwreath" is applied to several varieties of spirea, so in ordering it is best to specify the variety. Bridalwreath is inexpensive, has abundant bloom and fine foliage. It improves with age, is graceful in form, free from insect pests, easy to transplant, and conspicuous without being too much so.

As a plant to stand alone, it is unexcelled. Bending under its pile of snowlike flowers for weeks in the spring, it needs no other shrub in the same clump to give a long-flowering period. Banked against the foundation of the house, it supports and rounds out the architecture and conceals what is usually an ugly foundation or bare corner. For a hedge, it has no superior. Planted in a straight row, three feet apart in the row, it needs no pruning and comparatively little attention. Thus it supplies a fencelike border, ornamental, permanent, dense, and economical, which gives an air of privacy and refinement to any yard. It is a plant made for every man. The millionaire can find it as well as a package of flower seeds. More spireas (of the variety, Van Houttei) are sold than any other shrub on the market and every man should want the best there is. Why not put a few in your yard early in March? Now is the time to consult a nursery catalog and order some shrubs. Your yard is of as much im-

portance as your parlor—ten times as many people see it.

**SELECT YOUR SEED.**

Prof. George Stewart, of the Agricultural College Agronomy Department, says that now is the time to examine your spring seed. Look into your bins and see if your seed is pure and uninjured. All weed seed should be screened out and shrunken or broken grain eliminated. Just before planting treat your small grains with formalin, 1 pint in 40 gallons of water for smut-dipping is counted better than sprinkling.

Always buy your seed corn if possible on the ear. It keeps much better, conserves its vitality, and its defects may more easily be seen. You may save yourself trouble and expense by germinating a representative sample of your seed corn and determine what per cent will grow if planted.

**THE PROGRESS OF AGRICULTURE**

They used to have a farming rule  
Of forty acres and a mule  
The plan then came before us how,  
With forty rods and just a cow,  
Success with small things, gains were big;

Then forty yards with but a pig.  
Results were won by other men  
With forty square feet and a hen—  
And nowadays success we see  
With forty inches and a bee.

Ex.

Raise calves on clean, warm, sweet, skim milk, fed regularly.



## GOOD SEEDS

**GOOD AS CAN BE GROWN**  
Prices Below All Others

I will give a lot of new sorts free with every order I fill. Buy and test. Return if not O. K.—money refunded.

**Big Catalog FREE**

Over 700 illustrations of vegetables and flowers. Send yours and your neighbors' addresses.

**R. H. SHUMWAY, Rockford, Ill.**

## RAT CURE

**TABLETS**

ONLY RATS WILL EAT  
TRY BEFORE YOU PAY  
KILLS 4 RATS FOR 1 CENT

Merkle Mfg. Co. Dept. F Bloomfield, N.J., U.S.A.

Protects you  
Against  
Drouth

Write for  
FREE  
BOOKLET



**The Original Brillion**  
**Will Increase Your Yield**  
**8 to 15 Bushels Per Acre**

The original Brillion Clod Crusher protects you against drouth by causing moisture to be retained a few inches below the surface. It crushes, pulverizes, rolls, levels, packs the soil, making a perfect seed bed. The increased yield will more than pay for it the first year. Write for FREE BOOKLET.

**MOLINE PLOW CO.**  
Dept. 422 MOLINE, ILL.

Mention Utah Farmer when you write.

## POULTRY

WHAT OUR WOMEN CAN DO.  
By Edwin Brickert.

The greatest thing in the world next to man is woman. Therefore we are most interested in what the women can do, we men are. It is a fact that in a great many respects, women are more successful with poultry than men can possibly be. In most cases the woman is blessed with more patience than the members of the stronger sex, which is a very desirable attribute to the raising of our domestic birds.

In the hatching and rearing of the little chicks, the feeding and care of the laying hen and in the preparation of the show bird, our fair sex usually have more success than we do for the following reasons: Although they are just as industrious as we are, they can arrange to find more time for this occupation than the man thinks that he can. The patience and quietness above mentioned contribute greatly to her success and I believe she is often liable to notice, carefully and solve little things that we overlook or don't think worth bothering with. Women are especially adapted to handling correspondence and as the mail order feature of the poultry business cannot be conducted on such exact business ethics as other lines can, women with their tendency to be minute in their description of stock, are more successful many times in landing orders.

I have noticed at different times when I start to tell a farmer any thing in regard to the poultry business or give him a little advise, he will invariably say, "Wait and tell that to my woman, she is the 'chicken man' here." And he will say, "Tell that to the women folks, I make them tend to the poultry." This gives an illustration of how our dear mothers and wives are used and in a great many instances they take kindly to it and do their best, and many times under very difficult circumstances. I have a few words to say to the Utah Farmers who have allotted the poultry business to their wives and daughters and they are as follows: You regard chickens as a nuisance and think them not a profitable part of your farming and have therefore left your wife the unpleasant task of getting from them what she can, any way she can. If you will only give the chickens a few necessities and the women some conveniences, the chickens will pay a larger profit in the money invested than any other branch of farming. Build the chickens a comfortable house with places for feed and water. Have the house cleaned out every week or two and the litter hauled away, not thrown out of doors and left. Do what you can to lighten the labor of this "help mate" of yours and help her to make a success of the job you have placed upon her and don't stand around and with your hands in your pockets, howl out in your laziest tone, "There's nothing in chickens."

The good books says, "What man hath done, man can do." We will apply this to woman in this case. I will tell you what some women have done and are doing with the hope that it will enthuse every feminine

Buy Your  
**LUMBER**  
Direct From  
**MILL**

**SAVE 20 to 50%**

Draw up a **on Your Next Lumber Bill** and mail it to us. We ship you direct and cut out the middleman's profit.

We give you Fir lumber fresh from the saw, clear and clean. Guaranteed quality and prompt shipments.

Write Today—  
We will Save  
You Money

**Pacific Coast Sawmill Company**  
832 Dekum Building Portland, Oregon

**MORE EGGS**

BETTER THAN THE BEST BEEF SCRAPS

**PACIFIC PIONEER**

AVAILABLE PROTEIN  
FISH MEAT MEAL  
FOR POULTRY

CHEAPER TO FEED NO FISHY FLAVOR

SEND FOR SAMPLE AND PRICES  
WESTERLY LOW CO.  
40 BEALE ST.  
SAN FRANCISCO, CAL.

To get rid of rats get  
**RID-OF-RATS**

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**\$36**

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Hame tugs, 1½ inch, with three loops and patent buckle. Traces 2½ inches solid single ply, with cockeyes.

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DENVER, COLO.

reader of this, who is so inclined, to make her poultry business bigger and more profitable thereby helping to support her husband and children. Women not only succeed in poultry keeping for market purposes, but they have in many instances been eminently successful as fanciers.

(Continued on page 15)

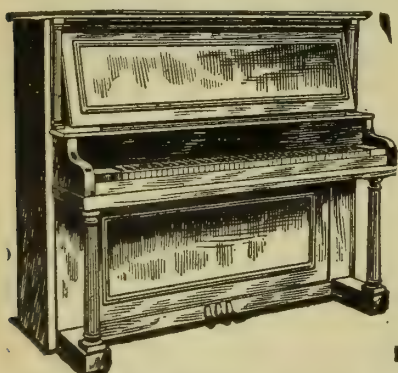
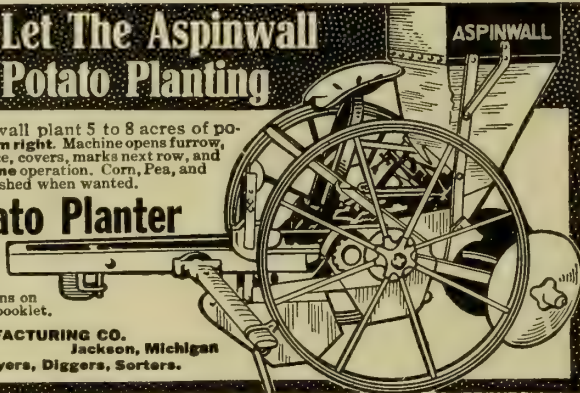
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**One-Half**  
**On a Piano**

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Gentlemen:—Please mail me your list of rebuilt and rented

Pianos Players

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This is the opportunity you have been waiting for.

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**THE UTAH FARMER**  
LEHI, UTAH

**BABY CHICKS & HATCHING EGGS**  
White Leghorns, Brown Leghorns, Barred Rocks, R. I. Reds, Black Minorcas, Anconas, Buff and White Orphingtons. Prices on application.

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First class Jersey calves for sale, CHEAP. Also one 2 year old bull and the old herd bull. All registered.

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Single Comb White Leghorns. The kind that pay for five or six years. Especially bred for long profitable service. Send for booklet. Early orders insure your wants.

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Rose Comb Rhode Island Reds and White Wyandottes, Single Comb Black Minorcas and White Leghorns. Egg fertility and stock guaranteed. Write your wants. E. C. Blanpied, Box 60, Milford Utah.

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A BARGAIN

"SEE ME."

160 acres good dry farm land South Jordan, near ditch, just the thing to get a start on, only \$20 per acre, no cash required down. You can have it practically on your own terms.

640 acres, some hay land, water right. Can grow at least 80 bushels oats per acre, fine for hay, grain and stock. A bargain at \$15.00 per acre, small cash payment, or might take city property at cash value.

860-acre improved ranch, independent water right, one mile from town and railroad, nice herd of cattle, horses, hogs, lot of implements, hay 5000 bushels oats go with place. First-class free range. Cheap at \$35,000.00. Terms or would take city property at cash value.

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## Money to Loan

On improved farms with primary water rights, at reasonable rates."

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## DO YOU GET THE MOST OUT OF YOUR HOGS.

Some people still think, that a "razor-back" if "crowded" will develop into as large a hog as the average purebred.

Scientific experiments prove that purebreds are "larger boned," more prolific, better rustlers, and have a greater capacity for growth than grades.

Our herd is made up of eight of the choice blood strains of the U. S. The Defender, Volunteer, Illustrator, Good Enuff, and Wonder strains are famous. Look them up, and see for yourself.

## RICHARDS LIVESTOCK CO.

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J. S. Richards Mgr.  
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**SEEDS**—Direct from the worlds best growers. Sold to the planters at wholesale prices. Guarantee tag upon every shipment. Your moneys worth or your money back. Sudan grass seed only \$6.00 cwt. Other seeds of highest quality at lowest prices. Wholesale price list free. C. E. White Seed Co. Plainview, Texas.

**DRY-FARM MANAGER** wants position. Has good knowledge of farm practice feeds and live stock; dry farm crops, climate requirements; equipments etc.; technical and practical knowledge of oils and manipulation for crop production in dry regions. Will go anywhere; am single, sober, experienced, willing to work, business like and bound to make good; age 30; best of references. State wages you can give. Address A. D. care of Utah Farmer.

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14½ acres land, near Spanish Fork, Utah. Also home in Spanish Fork. Cheap, good terms. Write

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200 stands of Bee's and all equipments, cheap, in good condition. No Foul Brood.

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## FOR SALE CHEAP

Some Jubilee Incubators as good as new, holding 500 eggs. Also two successful machines holding 320 eggs each.

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## Holsteins For Sale

Cherry Creek Dairy Farm offers Registered Cows, Bulls and Heifers. Sons and daughters of Rag Apple Korndyke 13th. Grand champion Utah State Fair 1915. Sire Rag Apple Korndyke. Dam, Fairview Mabel Korndyke A. R. O. record 25.51 pounds butter in seven days fat 4.83 per cent as a Jr. three years old. We offer 10 choice heifers age 2 months to one year for \$1000.00. A bargain for some one. Bulls from \$75.00 to \$150.00. Including a choice Bull calf 5 months old from Lady Netherland, 1st prize. Also 1st in milk and butter fat contest Cache County and Utah State Fair.

**NELSON BROS. Props.**

Richmond

Utah

Farmers, attention; save money by sending for guaranteed home garden combination offer. Crandall, 1110-19th St., Denver Colorado.

## WHAT OUR WOMEN CAN DO.

(Continued from page 14)

Some of the most useful standard varieties are due to the good judgment of the gentler sex.

It was a woman who originated the already so popular Missouri White Fluff.

It was a woman who went in to the great San Francisco show in November and won all the firsts, second and many of the minor prizes in a class of 300 entries. This same woman sells all the eggs she can produce at from \$5.00 to \$25.00 per 15.

The American Poultry Association is proud of their two judges who have made good, Judge Florence Forbes, and Judge Margaret De-Freitas. These ladies are not merely judges but are breeders and breeders that have used their heads to improve the poultry fancy and make it better.

At the late Worlds Fair poultry show there were five women exhibitors who appeared upon the scene, and all of them took their share of prizes and one of them took the lion's share.

Some of the largest and most successful poultry plants in the world today are run in the name of the head of the family, but that bride that vowed to honor and obey her lord furnishes not only the work but the brains for this enterprise.

Many a man has his name famous far and wide as a poultry breeder and exhibitor, when that honor really belongs to his wife and he is nothing but her cashier and bookkeeper.

In conclusion I want to quote a few lines from a letter I received lately. Its from a woman who is a squab raiser. "I am now selling my birds on the Chicago market and they are clearing me above all expenses \$175.00 per month. My husband, by the way, is still receiving his \$2.00 per day at the same old job he had when you were here, but he has quit making fun of my pigeons and is talking about increasing the flock to 200 pairs, but I gently reminded him that this is "my squab business."

"Raise your heifer calves" is the slogan for 1916.



DR. JOHN A. WIDTSOE.

(Continued from page 4)

Soils of Sanpete and Cache Counties, was the first of its kind in Utah and one of the first in the West. In fact one of the secrets of Dr. Widsote's work has been that he has gone out over the State and made himself acquainted with the needs of its many sections. This practice which is now adopted by all the Station workers has done much to make the Experiment Station of immediate value to the farmers.

It was after his return from two years of study in Europe that Dr. Widsote began seriously the studies of dry-farming and irrigation, which have brought much fame to the workers and to the Agricultural College. The proper use of irrigation water seemed to him the key to successful agriculture in Utah. In attempting to unravel the natural laws involved in irrigation, the question of the value of the natural precipitation of rain and snow began to loom large; and, it was soon found that, if properly husbanded, the normal rainfall of Utah was sufficient over millions of acres to produce certain crops without irrigation. The principles of dry-farming were then formulated and published in Bulletin 75, by Dr. Widsote and the late Prof. L. A. Merrill. This was the first bulletin published on dry-farming in the world. It won instant recognition, and was followed by similar bulletins in nearly every arid and semi-arid State. Dr. Widsote continued the dry-farming work in Utah, he secured the establishment of the State experimental dry-farms; helped organize the Dry-Farming Congress, and wrote and spoke everywhere on the possible reclamation of the desert without irrigation. The wealth added to Utah and to the world by the development of dry-farming is tremendous.

Meanwhile, the irrigation work was going forward. In 1901, Dr. Widsote secured the co-operation of the U. S. Irrigation Investigations, and later State aid was secured and at Logan were undertaken comprehensive and exact studies of irrigation practice, which, though copied in

many places have not as yet been surpassed. These investigations are still being continued. As a result of this work the underlying laws of irrigation practice were worked out, and a scientific basis was given irrigation. The conclusions reached from these studies are gradually being adopted wherever irrigation is practiced, and the irrigated area is being greatly enlarged and made more profitable by the better knowledge of the use of irrigation water. The value of such work, in dollars and cents can not be computed.

Sandwiched in among these major investigations of lucern, sugar beets, Utah soils and waters, dry-farming and irrigation, many lesser studies were carried on by Dr. Widsote, and many of them of high value to the State.

The results of all this work have been published chiefly in twenty three or more bulletins of the Utah Experiment Station, though much has gone into technical scientific or general, popular papers. The dry-farming work was summarized in the book "Dry-farming," published by the MacMillan Co. of New York and London, and translated into many languages. The irrigation work has been summarized in the book "The Principles of Irrigation Practice," published a little more than a year ago by the same firm. Dr. Widsote's books have received high commendation. He is now completing a brief farmers' manual called a "Rule Book for Irrigation Farmers."

Early in his career Dr. Widsote became an enthusiastic advocate of extension work among farmers and housekeepers. He was in charge of the first farmers institute party of Utah, which in the summer of 1897 visited nearly one half of the counties of Utah. In 1901 he was in charge of the farmers' institutes, and organized the first farmers and housekeepers schools. In 1907, he recommended the establishment of the Extension Division, and in the following year organized the Farmers Round-up and Housekeepers Conference now known as the Farm and Home Convention. The extension work of the College has brought much added wealth and in-

creased joy to the farmers and housekeepers of Utah.

While all this work was going on, Dr. Widsote also had other duties. From 1895-1905, he was in charge of the Department of Chemistry of the College; from 1894-1905, Chemist of the Experiment Station; from 1900-1905, director of the Experiment Station; from 1905-1907, director of the School of Agriculture, B. Y. University, and from 1907 to 1916, president of the Agricultural College. Under Dr. Widsote's direction the matters entrusted to him have grown and prospered. The Agricultural College, as at present officered, equipped and organized is largely due to his work, and is the best evidence of his ability and fidelity.

Perhaps, however, Dr. Widsote's chief claim upon the gratitude of the people of Utah is as a fisher of men. He has always been surrounded by strong associates like L. A. Merrill, E. D. Ball and others, with whom he has worked in close and friendly co-operation. He has encouraged hundreds of young men to seek advanced training and as a result the faculty of the Utah Agricultural College is one of the strongest in the West, with many western men on it. Most of the leading professors of western origin, on the College faculty have been Dr. Widsote's students. To find a well endowed man, and to help him find himself, and to lead him into a life of service to the people is as a priceless gift.

Active has been the life of Dr. Widsote, many honors have come to him; but his chief satisfaction has ever come from the hope of serving the people of his State. Though he is now called to another field of activity he will continue his labor of applying the principles of science to Utah's agriculture, for Dr. Widsote is proud of his conviction that the science of agriculture stands with full height by the side of any other science organized by man.

In his new work, which is but a continuation of the old the Farmer wishes Dr. Widsote God speed.

# FIFTY ACRES

**Extra Choice Irrigated Land---** RICH, BLACK LOAMY SOIL

**Water Rental \$1.00 an Acre Per Year When Used**

LOCATED AT ELBERTA, UTAH, 4 MILES SOUTH OF ELBERTA STATION ON D. and R. G., TINTIC BRANCH.

EUREKA AND OTHER MINING CAMPS ONLY A SHORT WAGON HAUL.

SOME OF THE BEST SUGAR BEET AND ALFALFA LAND IN THE STATE.

THE LOWEST PRICE THAT ANY AJJOINING LAND HAS BEEN SOLD FOR IN THE LAST 5 YEARS. SOLD AT \$125.00 PER ACRE. THERE IS A REASON WHY WE WILL MAKE A VERY LOW PRICE.

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Devoted to Agriculture in the Rocky Mountain Region

OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE

VOLUME XII; No. 30

LEHI AND SALT LAKE CITY, UTAH

FEBRUARY 26, 1916



IN THIS PICTURE IS SHOWN ONE OF OUR MANY BEET FIELDS.

Topping the beets, making ready for hauling to the sugar factory. Sugar beets play an important part in our crop rotations. New sugar factories are being built and the beet acreage is being increased each year.



# SPECIAL

High Grade, Carefully Recleaned  
 Alfalfa, Red Clover,  
 Alsike Clover,  
 White Dutch Clover,  
 Sweet Clover,  
 Grass and Garden Seeds

SEND FOR BIG CATALOGUE  
 POULTRY SUPPLIES

**Vogeler Seed Co.**  
 Salt Lake City, Utah

## Profit Makers

AGLANCE at Government reports shows how great a factor potatoes are becoming in Middle West production. Growers know that modern tools are necessary for satisfactory profit. Last year's crop is nearly 60 million short. Seed will be scarce and high. We have a Potato Planter that puts one piece in each place and one only.

## IRON AGE

Potato machinery, garden tools, spraying machinery, etc., are built to give profit making service. Almost any combination you can think of in each line. Eighty years of factory and farm experience behind their manufacture.

Ask your dealer to show them and write us for our representatives: Utah Implement-Vehicle Co., Salt Lake City, for separate booklets fully describing lines in which you are interested.

Bateman Mfg Co. Box 836 Grenloch, N.J.

Wheel Hoes  
 Garden Seed Drills  
 Potato Planters  
 Weeders & Seeders  
 Riding Cultivators  
 Walking Cultivators  
 Potato Sprayers  
 Bucket, Barrel and  
 Power Sprayers  
 Potato Diggers  
 Cornstubb Cutters  
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 Row Makers  
 2 and 4 Row Markers  
 Corn, Bean and Pea  
 Planters  
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 Land Rollers



Combined  
 Drill and  
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100 per cent  
 Potato Planter



Riding  
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Seven-and-a-half  
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No. 190  
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Horse Hoe and  
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UTAH IMPLEMENT-VEHICLE CO., SALT LAKE CITY, UTAH.  
 Agents and Distributors for the Iron Age Goods.

OPENED JAN. 1ST, 1913



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 in all the WEST"

WHEN IN LOS ANGELES  
 STOP at the NEW  
 FIRE PROOF  
**HOTEL NORTHERN**  
 EUROPEAN  
 200 OUTSIDE ROOMS  
 150 WITH BATH  
 420 W. 2ND ST. NEAR HILL  
 NORTHERN HOTEL CO., PROP.  
 FRANK L. CRAMPTON, MGR.  
 CAFE  
 IN CONNECTION RATES \$1.00 PER DAY AND UP

## Barnyard Manure--Its Uses and How to Apply It

Barnyard manure is composed of excrements from live stock, bedding and uneaten portions of forage. The manure proper contains approximately eighty per cent of the plant food taken from the soil in the development of the feed. The litter and other substance not eaten, contains all of the plant food consumed in making it. The inorganic elements taken from the soil by the growth of the plant amount to only a small per cent of the total. The bulk of the substance is made up of elements, namely, oxygen, carbon, hydrogen and nitrogen, taken from the atmosphere either directly or indirectly.

A ton of barnyard manure contains from thirty to thirty-five pounds of nitrogen, phosphorus and potash, the amount depending upon the kind of feed eaten by the animals. These plant food elements should be returned to the soil in order to stay depletion. The balance of the substance should be placed in the soil in order to maintain its humus or organic properties.

Nitrogen is the most important and the most expensive of all plant food elements. Its source is in the atmosphere. It is taken from the atmosphere and fixed in the soil by legumes such as clover, alfalfa, peas, beans, vetch, etc., through the medium of little nodules that form on the roots of these plants. It is also put into the soil in manures, both barnyard and green crops plowed under.

Farmers should at all times keep in mind the fact that soil may contain an abundance of the inorganic elements, but if it does not contain organic matter in the form of humus, those inorganic elements are not utilized by the plant to the fullest degree.

It is a lamentable fact that many farmers do not fully appreciate the value of barnyard manure. It is estimated that a billion dollars worth of fertility is wasted through carelessness every year. Some farmers do not seem to realize that the yellow stream trickling from the manure pile and from the barnyard is just as precious as the golden grain in the bins.

If manure cannot be applied fresh, it should be stored where its essence will not be lost by leaching and running away, until such time as it can be applied to the soil.

A cement bin or pit properly covered, or a cheaply constructed shed, will protect it from wasting. To leave manure in exposed piles in the yard or scattered about, as is too often the case, is almost a crime.

Beyond question some soils are so deficient in one or more of the inorganic elements that barnyard manures will not supply them in sufficient quantities. For instance, a peaty soil does not contain sufficient potash, but does contain a superabundance of nitrogen and organic matter. To apply manure to such soil would only tend to increase the unbalanced condition. Another soil may be almost depleted of phosphorus. In such cases it is perfectly proper to supply the lacking element in a commercial form.

The fertility of most of our soils, however, can be maintained by the judicious use of barnyard manure, keeping in mind, of course, the necessity of planting legumes, rotating crops, applying lime, tilling deep and thoroughly, and adapting crops to conditions.

### Applying Manure.

Manure should not be applied in a haphazard way, but should be evenly distributed with a mechanical spreader. If spread with a handfork it is very apt to be left in lumps or bunches, which is always bad, for there will be too much fertility in one place and not enough in another, causing an uneven growth and maturing. Bunches turned under create air spaces, prevent development of roots and facilitate the evaporation of moisture. Manure should be evenly spread with a spreader and subsequently disced in order to secure an even distribution throughout the entire seed bed. It has been repeatedly demonstrated that if manure is applied evenly to the surface and then disced in, that the yield is increased from ten to twenty per cent.

Again, the manure spreader is an economical factor in farm operations, which, in these times when labor is so high, is a matter of vital importance. In a trial made by the writer, it cost \$88.00 to haul and spread 200 loads of manure when the manure was placed in piles and subsequently spread with a fork. It cost \$80.00 to haul the same number of loads and spread from the wagon, and it cost \$40.00 to haul and spread 200 loads with a manure spreader. The difference in the value of the crop produced where the spreader was used was also very material.

### FORTY ACRES PRODUCE \$4400.00.

That a good profit can be made in raising alfalfa seed on Utah land is shown by the story that comes from Leamington. The details for this remarkable crop and the adaptability of Utah soils for the growing of alfalfa seed are shown by the figures furnished by Bishop R. B. Ashby.

The forty-acre tract yielded 461 bushels of alfalfa seed, weighing 30,140 pounds, which sold at 14 cents a pound, just as it came from the thresher, without cleaning, bringing him a total of \$4219.60. There were seventy tons of chaff, after the seed had been taken, which sold for \$7 a ton, bringing an additional \$490, or a total return from the tract of \$4709.60. The expenses for cultivation and harvesting the crop amounted to \$343, divided as follows; watering, \$40; cutting and hauling, \$65; threshing, \$188; sacking and loading, \$50; leaving a net profit of \$4466.60.

The seed was taken from the second crop of alfalfa. The first crop harvested earlier in the season from the same forty-acre tract, netted a sufficient return on hay alone to pay for its cultivation and the taxes on the farm for the year.

Profitable handling of potatoes and apples means careful harvesting and proper storage.

When you answer the advertisements in this paper tell them you saw it in the Utah Farmer. Always buy advertised goods.



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A YEAR.  
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SUBSCRIPTION  
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COMBINED WITH THE DESERET FARMER AND ROCKY MOUNTAIN FARMING.

VOLUME XII. LEHI, UTAH, SATURDAY, FEBRUARY 26, 1916 No. 30

# The Production of High Grade Seed Potatoes

By Lou D. Sweet.

The test of a good seed potato is its productiveness. When planted and given proper care in the growing of the crop, a good seed potato will produce a goodly number of clean, marketable potatoes. Productiveness is the final test of all seed stock whether of potatoes or any other farm crops. Good seed may produce a fair crop under quite adverse growing conditions, but poor seed cannot produce a good crop even under very favorable conditions.

The subject of the production of high grade seed potatoes is undoubtedly being given increasing consideration throughout the country, and more care and attention are also being given to the proper handling of the crop; but it is also undoubtedly true, as shown by the very small average yields, that the greater part of our potato acreage is still being planted with culls or inferior seed, with the natural result that a very large part of the labor spent on the crop is wasted, as the yields are small in quantity and poor in quality.

We hear much of the "running out" of potato varieties, and the impression is quite general that any variety will run out after a few years of planting, more or less; but what is this "running out" except the natural deterioration resulting from the repeated planting of the culls and poorer specimens, while the best are sent to market? Whereas, if only the best were used for seed purposes, and these planted in good ground and properly handled, this tendency would, in most cases at least, not only be entirely overcome, but a marked improvement in both yield and quality would probably be obtained.

Mr. L. H. Newman, in his "Plant Breeding in Scandinavia" states that "In Sweden there is a potato known as the Dala, which is said to have been introduced about 150 years ago and is still one of their best sorts; that the opinion held at Svalof," (the great experiment station) is that there is no period of old age in a variety of potatoes; that where suitable sorts are used, and where suitable tubers of these sorts are used for seed purposes each year, the planting of the variety may be maintained indefinitely under all favorable conditions of soil and climate. The main considerations are maintenance of vigor and control of disease, and this implies careful selection of seed tubers, careful cultivation and spraying, and rotation of crops. Special emphasis is laid upon the latter point." Also in Bulletin No. 64, of the U. S. Department of Agriculture, by Dr. W. A.

Orton, on page 2, we read that "The same system of seed selection and treatment and crop rotation that will free the potato fields of wilt, leaf-roll, and curly-dwarf will at the same time not only bring under control the blackleg and some other diseases, but will insure the maintenance of the strains cultivated in their most vigorous and productive condition and free from objectionable mixtures with other varieties."

In our own district in Colorado the old Peachblow (which was widely grown throughout the country some forty years ago, and which some of you knew when you were boys) has been continuously grown for the past forty years, and it is as good now as it ever was, although it has "run out" practically everywhere else. That there is in the cultivated potato a strong tendency to degenerate or deteriorate, where the crop is planted without any attempt to select only the best for seed, is undoubtedly true, but that this tendency can be overcome, under ordinarily favorable conditions, by the planting of only good seed and proper handling, is also true.

In the northern potato growing districts of this country it is quite practicable for the farmer to grow his own seed, through proper seed selection and handling in a special seed plot, and there seems to be no good reason why he should not do so, and thus have good acclimated seed suited to his locality. Where this is not practicable, for various reasons, it is much better for him to obtain his seed from some recognized seed potato grower who makes a specialty of the variety he wants to plant, preferably some grower in a more northerly locality or in a higher altitude, as such seed usually has more vitality and vigor and gives better results than seed grown in lower altitude or latitude. Many growers in England make a regular practice of purchasing their seed potatoes from Scotland, claiming to get much better results by so doing.

The development of high grade seed potatoes is not a mysterious or difficult matter at all; it simply requires painstaking care and attention, and right methods must be consistently carried out year after year if the best results are to be regularly obtained by the grower. In illustration of this the following will be interesting: An experiment made by the U. S. Department of Agriculture in Southern Michigan, in the selection of seed potatoes from high yielding hills, resulted as follows: "Hills yielding six or more marketable

tubers were saved for planting purposes. The first year 16 out of 100 hills met this requirement. This was continued up through two, three and four years. The fifth year 70 hills out of 100 reached this required standard."

The first essential to successful seed potato growing is good soil, properly prepared; the next is true-to-type seed that is strong in vitality and vigor. Without both of these essentials good crops of potatoes cannot be raised. A good soil for potatoes must contain a large proportion of humus, and this humus at planting time should be well decomposed, making a fine loose seed bed that will hold plenty of moisture without preventing the free circulation of air. This seed bed should also be deep to provide plenty of forage ground for the roots of the plant.

Archibald Findlay, one of England's greatest potato breeders, says "The potato plant yields out of all proportion to the outlay where deep cultivation is practiced." Where humus is lacking it may be supplied by the application of manure, plowed under in the fall, but a better way is to plow under a green crop, preferably of some legume. Mr. George Sinclair, Manager of the Earl of Roseberry's great Dalmeny Farm near Edinburgh, Scotland, the farm that is famous the world over for having produced the largest yield of potatoes ever recorded. (over 120,000 pounds per acre) says that on his farm "Potatoes always follow grass" and "There is no potato disease in Scotland if the crop is only grown every fourth year and on turf or sod ground."

On our ranch in Carbondale, Colorado, we supply the necessary humus by plowing under a green crop of alfalfa in the fall, when it is about knee high. This alfalfa, which has been growing for three or four years, has filled the ground with its roots, and when it is plowed under in the fall, about four inches deep, it supplies an amount of organic matter that is equal to an application of twenty tons of manure per acre, according to Government report. The land is then allowed to lie rough all winter so that the frost and the action of the elements may help to decompose the green alfalfa. As early as the land can be worked in the spring, which with us is usually in April, we again plow the ground from ten to twelve inches deep, then work in over with a disk or spring tooth harrow to thoroughly break it up, and a leveller used to fill hollows and take down any ridges that may exist. By this time

the green alfalfa has become decomposed and the ground is filled with humus ready for the potato crop. For the production of market potatoes we usually begin planting about May 5th, but for seed potatoes the planting is usually deferred until about July 1st, for reasons which will be stated later.

The next step in the raising of high grade seed potatoes is the selection of true-to-type seed of the variety to be grown. Where hill selection has been carefully done in the fall, and the seed potatoes properly stored in crates, they are of course ready for treatment and sprouting, but where seed must be selected from the bins, care should be taken to select only true-to-type potatoes, as the very fact that they are true-to-type is in itself an indication as to their quality, and they will be more likely to start the one master sprout which usually produces a stronger plant and a better yield of potatoes. Where the grower is compelled to get his seed from outside sources he should try to obtain it from growers whose average yield of market potatoes is good, say from 300 to 500 bushels per acre, and whose stock is clean and free from disease. Potatoes from such fields must have plenty of vitality and vigor or such yields could not have been obtained. After thorough treatment with corrosive sublimate or formalin, these selected seed potatoes should be placed in shallow crates and kept in a dark place until they begin to sprout, then taken out doors and exposed to the light so the shoots may become thoroughly greened and toughened, when they are ready to plant either by hand or machine. If the sprouts are short and are well greened they will not easily be broken off even in machine handling. In Farmers' Bulletin No. 533, of the U. S. Department of Agriculture, by Dr. William Stuart, on page 6, he says in reply to the question "What constitutes good seed?" "Pure seed from productive plants, not overripe, uniform in size and shape, firm and sound, with first sprouts just showing at planting time. Seed of such quality if furnished suitable cultural conditions will seldom fail to produce a remunerative crop."

If the seed potatoes are well bred and high grade they will, in most cases, start only a single heavy master sprout from the seed end, some times two but usually only one, and this sprout is the strongest and best the potato is capable of producing. If it is not broken off or injured this sprout will be the only one to grow and will produce a stronger plant

(Continued on page 6)



## DAIRYING

### RECORD OF TESTS OF DAIRY COWS IN BEAVER COUNTY. H. A. Christiansen, County Agent.

Twelve farmers and dairymen have been co-operating with the county agent in keeping daily records of the production and feed of their milch cows during the past year. Over 100 cows have been on these records and many surprises to farmers have been made.

This work was done not because butter fat prices were encouraging at all to farmers in this county, but because only a very few of the farmers are able to get grazing permits on the public ranges for sufficient number of head to justify ranging beef cattle. For this reason all their stock must be fed the year round on the farm and as a consequence less live stock can be kept and the cost of feed is much higher. Under these conditions farmers cannot afford to raise beef cattle alone. They must have stock that yields a double production in order to receive a profit for their work and feed consumed. This is demonstrated by the fact that probably ninety per cent of the farmers of the older settlements are milking a small herd of cows.

This work was done to demonstrate to these farmers an accurate and practical way of determining the most profitable cows and to enable them to eliminate the poor producers and thus grade up their herds.

The farmer co-operating kept their own records and took the milk samples to be tested all under the direction of the county agent. The agent collected these samples once a month and made Babcock fat tests of the individual cows. He also kept a summary of all records. At the end of the year summaries and averages were compiled from these records so that comparisons could be made of individual cows and of herds.

Two compiled summary records were made. One is of the average of the years work of individual cows including the following factors for each herd: breed of cow, age, average lbs. milk and fat per month, average test, value of skimmed milk at 20c per cwt. for hog feed, average price paid for butter fat by creameries buying in this section, which was 23c, average cost of feed per month,

number of months on test, actual lation period, profit per month and per ten months in year if kept up average after feed had been subtracted.

The other record is a comparison by herds of the average production as follows:

Because of a few co-operators being slow in getting their records in and because of some cows only being on record a short time only 79 cows were used to make the above comparisons.

Looking across the bottom row in the above table giving the profit for ten months, we notice that the 10 per cent of best cows gave a profit of nearly twice as much as the average of all the 79 cows and over five times as much as the average of the ten per cent of poorest cows. Too many herds are of the poorest class, but we will take the average of all the cows and the average of the ten per cent of the best cows for comparison. It is probably fair to value the first at \$50 per head and the second at \$100 per head. The last in actual profit would be worth more than twice as much and would sell easier for that price.

For convenience we will call the two classes at \$80 and \$40 cows. After one gets the foundation stock it does not cost any more to raise the \$80 cows than it does to raise the \$40 cows. One half as many of the first will produce as much profit as twice as many of the second. The best does not eat any more than one of the poor cows, requires only half the work and stable room, and from the standpoint of raising them the chance of loss is only half as great because one only needs half as many cows to make the same profit, say nothing about the greater interest in working with good stock. If assuming as breeders do that like begets like, the \$80 cow's heifer is worth twice as much as the heifer of the \$40 cow. Then from the standpoint of her double production and economy, she is more than two hundred per cent more efficient than the average cow.

Some will say that the steer calves of the best cows are not as valuable as they may be of the average cows but out of the 8 best cows three were large Short Horn cows, two registered Jerseys, and three grade Jerseys.

In this county where butter fat is so low in price it may be that the Short Horn cows of the right kind are the most profitable, but one thing is sure, that cows kept on the farm must produce more than a calf, and that good dairy cows of the \$80 class will produce an equivalent of five good calves at \$20 per head.

It must also be understood that the dairy cow furnishes profitable employment for the farmer's family dur-



## It costs less to buy a DE LAVAL than to buy experience

**E**ACH year some 40,000 farmers, who have bought at one time or another, "cheap" cream separators, discard the inferior, cream wasting machines and replace them with clean skimming De Lavals.

These men bought the "cheap" machines because they thought they were "good enough" or "just as good" and that by purchasing such machines they could save a little money. They actually would have been better off in most cases had they bought no separators for they lost most of the money they spent for the "cheap" machines, besides all the cream these machines have failed to get out of the milk.

No one ever saved money using a "cheap" cream wasting separator or an old or half worn-out machine. No one ever got back the money spent for such a machine by continuing to use it. Those who bought "cheap" machines and got out of the difficulty best are the ones who quickly discovered their mistake, discarded the inferior machines and put in real cream separators—De Lavals.

There are nearly 2,000,000 farmers who have bought De Lavals, and every one of these had just as many opportunities to buy "cheap" separators as any one else. They did not do it and are now money ahead. They have avoided paying the high cost of experience, and their De Lavals have paid for themselves many times over. It always pays to buy a separator of proved, known superiority.

The nearest De Laval agent will be glad to let you see and try a De Laval on your own farm, without obligating you in any way. It is better to take advantage of this opportunity than to pay dearly for your cream separator experience. If you don't know the local De Laval agent, simply address the nearest main office as below.

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	Best 10 per ct. 8 Cows	Average of all 79 Cows	Poorest 10 per ct. 8 Cows	Best Cow	Poorest Cow
Milk—Average lbs. per month	913	638	437	878	380
Fat—Average lbs. per month	42.91	28.00	18.3	44.7	14.4
Test Average	4.7	4.4	4.2	5.1	3.8
Profit Average per month	8.60	4.86	2.23	9.15	1.25
Profit for 10 months in year if kept up average	80.40	43.00	16.70	85.90	6.90

ing the winter season when there is not much other work. She also brings a steady and regular income and keeps the soil fertility on the farm which means to the farmer building up a bank deposit from which generations may live upon the interest.

Worms in sheep or hogs are caused by infected pens or pastures. Watch these places.



SILO QUESTION.

Cannonville, Utah.

Utah Farmer:

During the last eight or ten months have been reading up on the Silo question and as a result am greatly enthused over the proposition. We have none in this part of the state that I know of and as I am thinking some of trying one I write for additional information. For a small farm what would you think of a silo fourteen feet in diameter and thirty feet high. Would it be necessary to fill the silo each season in order to prevent the ensilage from spoiling, or would it do equally as well to fill only part full? Can an ordinary carpenter build a stave silo, if so where may the hoops, etc., be obtained. Would a silo built of 2 by 4 by 12 ft. block spiked together after the order of a brick wall and plastered on the inside with cement be a success? Any other information that you may have on the subject will be greatly appreciated.

We have a wonderful cattle country here. The only drawback is winter feed. Water is very scarce but land is plentiful. We grow corn very successfully "dry land" and I believe that the silo, when once established, will be a great boom to our farmers and a means whereby we can redeem thousands of acres of land in this section that now are practically useless.

Yours truly,

O. G. ANDERSON.

Answered by J. E. Dorman.

The size of the silo depends on the number of cattle to be fed. In feeding silage, from one to two inches should be removed each day after feeding begins. This should be taken off in a thin layer so that the silage will be kept fresh and molding will be prevented. The following tables will give you the size of the silo required for the number of cows to be fed:

Table from Circular 136, U. S. Department of Agriculture, Bureau of Animal Industry.

Table Showing Ratio Between Diameter of Silo and Number of Cows to be Fed.

Diameter of Silo.	Number of Cows to be Fed
Feet	
10	12
12	17
14	23
16	30
18	38

It is best to fill the silo if possible as you not only get the full capacity of your building but when the silo is full it will pack much better and add to the keeping qualities of the silage. If you do not have enough material to fill the silo special care should be exercised in having it well packed. One or two men should be in the silo as it is being filled and tramp it well, particularly near the walls, and keep the silage level as the filling proceeds.

Any carpenter can build a home-made stave silo, and hoops may be made at any blacksmith shop. Bureau of Animal Industry Circular 136 fully describes the building of a stave silo and can be obtained by application to the Western Office of the Dairy Division, 318 Federal Building, Salt Lake City, Utah.

I would not advise the building of a silo with 2 x 4 blocks as you suggest. If you have gravel and sand conveniently located on the farm, it might be best to build a concrete silo. Full directions for the building of a concrete silo are given in Farmers' Bulletin 589. This bulletin, together with blue prints for making the concrete forms, may be obtained at the office above mentioned.

We are very much interested in your cattle country there, and we believe that a silo would add greatly to the profits of livestock growing in your section. The silo can be filled and if the silage is not all wanted for feeding during the present year, it can be kept over until next year and filled again. Silage will keep

Height of Silo Needed for a given Capacity with a Given Diameter.

Height of Silo.	Capacity of Silo having an inside diameter of:						
	10 feet	12 feet	14 feet	15 feet	16 feet	17 feet	18 feet
Feet	Tons	Tons	Tons	Tons	Tons	Tons	Tons
20	36						
22	30	43					
24	34	49					
26	38	55	74				
28		61	83	95			
30			93	105	119		
32			101	115	130	148	
34				125	143	161	181
36					151	174	196

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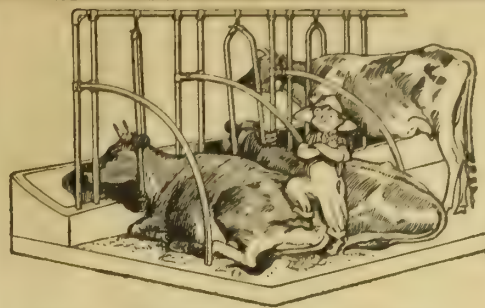
from year to year and can be stored up for future use in case of failure of crops.

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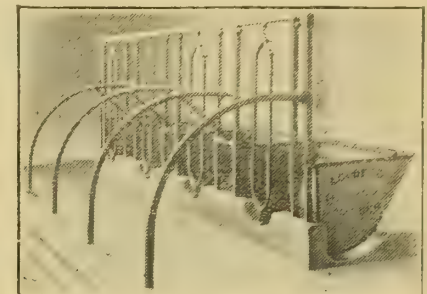
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EVEN WORSE

go?

Patrice—Is there anything as bad as being all dressed up and nowhere to

Penelope—Yes: fixing for company and having nobody call. —Judge.



## THE PRODUCTION OF HIGH GRADE SEED POTATOES

(Continued from page 3)

and better potatoes than where a number of weaker, spindling sprouts are started. The necessity for keeping seed potatoes true-to-type is strongly emphasized by the best growers all over the world, as in that way only can the variety be kept to its highest and best development. No sensible stockman would think of trying to build up or maintain the quality of his herd by breeding from the poorest and weakest animals and sending the best to market, and the same laws obtain with regard to plant life. If we want the best we must plant the best seed. Further, we know that in human beings, as well as in the lower animals, the one who is sound in health and strong in vitality is almost immune to disease; so, is it not reasonable to conclude, as experiments have fully demonstrated, that good pure seed that is true to type and strong in vitality should also be largely immune to disease.

In this connection would say that most potato specialists claim that the best way to overcome potato diseases is to develop the seed potatoes through the constant practice of hill selection and planting only the best, to such a robust condition of vitality and vigor that they shall be practically immune to disease. In illustration of this would say that an experiment was made in England with Sutton and Sons "White City" potato, (a very high bred variety) which was planted in land badly infested with the "Black Scab or Wart Disease." Two other different varieties were grown, one on each side of the row of White City. In one of these rows the crop was practically consumed by the Black Scab, while the White City was absolutely free, and in the row on the other side there was a very large amount of the Black Scab.

It has also been demonstrated by practical experience that seed potatoes, for best results, should be lifted or harvested before they are fully mature, as they seem to have more vitality and vigor and also to be less subject to disease. It is said of Mr. A. Burns, of Dumfermline, Scotland, a remarkably successful raiser of enormous crops of potatoes, that his experience is "If seed potatoes are only partially matured when dug, only the terminal bud or eye develops... One sprout gives the best crop, and it is ten days or more earlier. There is no disease and no spraying." It is also stated of Sir Matthew Wallace, who was knighted for his successful work in the interest of the potato industry, that "He is without exception using partially grown or partially matured seed. The potatoes that are lifted in July are kept over until the next March for planting. (This is accomplished by storing in houses with plenty of light which prevents the potatoes from sprouting.) He claims that he gets less disease than when lifted at maturity, the potato throws out a less number of sprouts when planted, it makes a more vigorous growth, and the sprout is stronger. Consequently the crop ripens earlier. He is very particular to keep seed true." Archibald Findlay, the noted potato

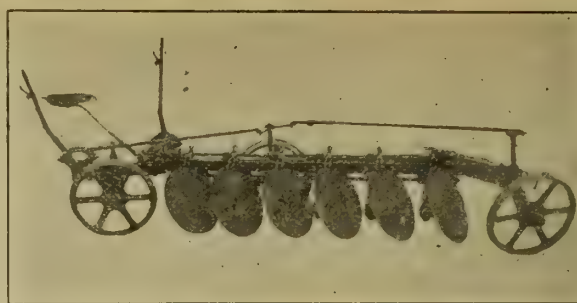
breeder, also says "All potatoes grown for seed should be harvested before maturity. We dig these when they show the sear and yellow stage of foliage. Never allow them to get into the dead stage and become fully matured." Messrs. Sutton and Sons, after long continued experiments, have demonstrated a gain of 100 per cent for the immature over mature seed.

Many test and practical demonstrations on large fields have proven beyond question, that where whole seed, true-to-type, is used instead of cut seed, much better results are obtained, as the plants are more sturdy and thrifty, resist disease better, and a practically perfect stand is obtained, which is most essential to profitable results. No grower can afford to take a loss of from 20 per cent to 30 per cent in the stand, when it can be almost entirely avoided by the simple expedient of using whole seed, as then all the nourishment in the seed is available for the plant as required, providing ample food until the plant roots are well started; whereas in the cut seed a smaller amount of nourishment in the seed is available for the plant, and part of that is likely to be absorbed by the ground, while the cut sides are also liable to infection from any disease that may exist in the soil, which the whole seed would be much more likely to successfully resist.

The use of whole seed has been the general practice abroad for many years, as they found that the extra cost of the whole seed, when compared with that of the cut seed, was much more than repaid by the greater crops harvested. Mr. Findlay maintains "That the extra cost of the whole seed is more than compensated for by a more vigorous plant and a heavier yield of larger potatoes. A recent experiment on the Western Slope, where whole and cut seed were planted side by side in the same field was somewhat surprising. When the field was harvested, the part where the whole seed had been planted produced about 400 bushels per acre, while the part planted with the cut seed produced about 140 bushels per acre.

This result has been the general experience wherever good whole seed has been used; that is, whole seed that was selected from high yielding hills or that was selected true-to-type from a crop grown from seed selected from high yielding hills. To plant just small potatoes taken from an ordinary market stock that was in turn grown from seed not hill selected, would be to invite an inferior crop, as the small potatoes from poor hills would far outnumber the small potatoes from good yielding hills, and, as the potato produces like the hill from which it comes, in the resulting crop the majority of the potatoes would be small. To get the full benefit from whole seed planting the grower must make sure that his whole seed comes from high yielding hills or crops.

For the production of seed potatoes either for the farmer's own use in his market field, or for the production of seed potatoes to be sold to other growers of table stock, it is best to plant only true-to-type, immature, whole potatoes averaging about 5 ounces in size. These may be planted six or eight weeks later than the regular market stock fields. We plant



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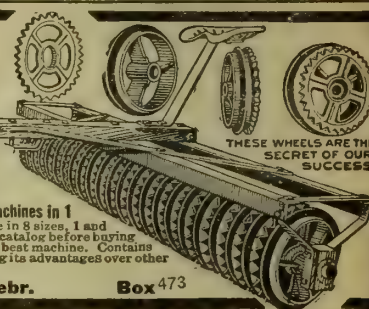
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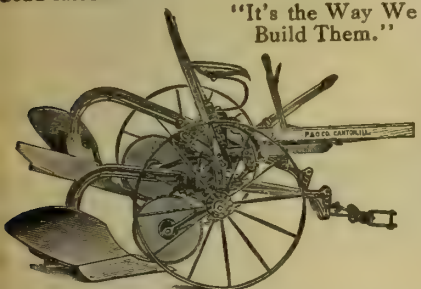


# P & O

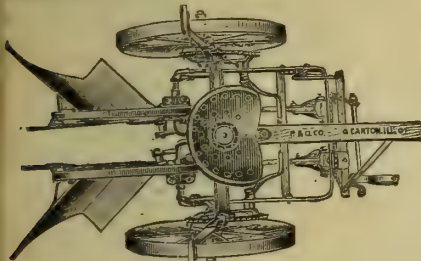
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about July 1st. At that time the warm weather and the favorable condition of the soil, in which a large amount of plant food is then available, causes a rapid growth and usually a much larger set-on than is found in the market field planted earlier in the season. On account of the short growing season, these seed plot potatoes will not grow as large as the earlier planted potatoes by the time frost kills the vines, which with us is about September 20th, but do produce a larger number of smaller sized ones, say from 2½ to 5½ ounces, which are good seed sizes, and these potatoes, being immature, will have a greater vitality and resist disease better than potatoes which have fully matured.

We usually plant in rows three feet apart and hills one foot apart in the row, which gives us about 14,000 hills per acre. We are able to do this because we build up our soil through consistent crop rotation—first year, grain and alfalfa; second, third and fourth years, alfalfa; fifth year, potatoes; then back to grain and alfalfa etc.—by which the soil is renovated and filled with plant food. We plant about four inches deep and about a week later start the cultivator, setting the shovels about eight inches deep, following this with a cross harrowing of the field, setting the teeth at an angle of about 40 degrees, so as to level the ground as well as kill any weeds in the rows. We usually cultivate about twice, and are careful to see that the ground is kept moist enough to keep the plants growing steadily without any check. By keeping careful watch of the crop as it grows we are able to locate most of the plants that show, by an abnormal growth of vine, a tendency to degenerate, and these are promptly rogued out, as well as any hills that show indications of disease.

Some time before the potato crops are harvested, all cellars or other storage places should be thoroughly cleaned and disinfected so that no vestige of fungus or other troubles may remain to infect the new crop. This is a matter that is largely overlooked by our growers, and very many cases of storage troubles may be traced to carelessness in this respect.

As soon as practicable after frost has killed the vines, or if earlier maturing potatoes are being raised, as soon as the foliage is "In the sear and yellow stage" as Mr. Findlay puts it, before the vines dry up, the seed crop should be harvested, without allowing it to lie in the ground for several weeks to mature as is done with table stock. In hill selection considerable dependence can be placed upon the appearance of the tops. A large top with one sturdy stem is usually found to have more and better potatoes under it than a hill with several weak stems. Select those hills in which there are a goodly number of tubers, all of them of good shape and most of them of good uniform size, and discard those where the shape is poor and the sizes very variable, even though there may be quite a number in the hill. Store enough of the very best selections for your next year's seed crop, and use the balance for your next year's market crop or sale as you may wish. In this way the purity of variety and the vitality of your seed potatoes are steadily maintained, and high yielding

seed produced that should be worth several times the price of ordinary seed potatoes.

In conclusion let me summarize a few of the points we consider essential for profitable potato growing; namely:

Always use true-to-type whole seed, if it can be obtained from high yielding crops or by hill selection.

Never plant seed from market stock running less than 300 bushels per acre, and that which has produced 500 bushels is much to be preferred.

Use only immature seed, sprouted and greened before planting.

Treat all seed potatoes with corrosive sublimate or formalin.

Plant seed plot potatoes late so as to obtain a larger set-on, and harvest them before full maturity.

Don't plant potatoes on ground that has been in potatoes for a number of years.

Adopt a rotation of crops that provides for potatoes only one year in five on the same ground.

Good seed is cheaper than poor seed, even though the first cost is twice as much.

Plant potatoes only on good ground that has been in alfalfa or some other legume for a number of years, and that has had a green crop turned under the fall before the potatoes are planted.

## STORING VEGETABLES.

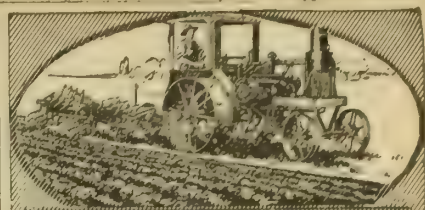
You remember the old-fashioned cellar, of course? Perhaps you even remember the odor of fresh fruits and vegetables that thrilled you as you entered it? The pungent turnips, the flavory apples, the earthy potatoes, carrots and cabbages and parsnips. You remember these things of course, and, maybe, regret their passing from sentimental reasons.

But have you stopped to think that it was not until the passing of the old-fashioned cellar that we began complaining of the high cost of living? In your efforts to solve the problem of the daily food have you associated the present high prices with the heated basement and with the little basket of potatoes out on the back porch? There is a direct connection, if you please.

Our modern houses do not have a "cold room" in the basement to take the place of the cellar. The furnace is generally in the center of the place, with its heat fatal to vegetables of all kinds, stored in any portion of the basement. The refrigerator is necessarily small; it is not intended for the storing of any considerable amount of foodstuffs. It is typical of modern life, is the refrigerator—a thing to help us from day to day and not from season to season. We do not know why the architects have never thought of building "cold rooms" in the basements, especially since they could be so cheaply constructed.

Last fall apples could have been bought for a dollar a barrel. Potatoes were cheap. Turnips were almost given away. All sorts of vegetables, in quantities, could have been secured very reasonably. But there was no place about the house to store them. We had to buy only what we could use from day to day. Now we are paying a pretty price because of the passing of the old-fashioned cellar. And we find fault with the "times" instead of the architects!—Dayton News.

Clean milk is obtained only by a clean dairyman.



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or some particular brand of goods by the advertising they are given. There are many ways in which the advertising may be done. There is a double protection with a trade mark.

If a manufacturer puts out a worthy article the trade mark protects him against the competition of articles no so worthy.

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It is this second protective character of the trade mark which reacts so effectively on the quality of the goods which bear the trade-mark. No man can afford to brand his product if the mark will only show people what to avoid.



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When a manufactor or jobber puts his name or  
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There is a tendency to raise the quality and  
lower the price, in so doing he is building up a  
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add greatly to his influence and  
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possible cost.  
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WHEN IN SALT LAKE  
MEET YOUR FRIENDS

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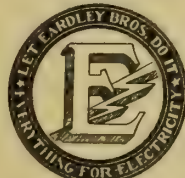


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## THE HOME

### TAKES UP FARM LIFE AND FINDS HAPPINESS.

We reproduce part of a letter by Mrs. Charles O Greenwood of Idaho written to a friend in Salt Lake. Mrs. Greenwood was once a school teacher and also did some newspaper work but now enjoys farm life. She writes as follows.

"I don't think I should be content ever to live all the time in the city again. I would like to visit there, but there is so much more fun in the country. You see, you have to make your own fun, and fun that you make yourself is twice as good as that you pay others to make for you. And, then, I like the manufacturing on the farm—the hog killing and the rendering of the nice white lard, and the making of the dandy hard laundry soap—it isn't made as it was in the old days, when a woman cooked soap for three days; I make it in half an hour. Then there is sausage making and meat curing and meat canning. I always feel rich when Charley has just butchered a hog. And the meat is so sweet and clean—it almost reconciles you to the loss of beef, which we can have but seldom. However, that will be remedied soon, for more cattle are coming into this country.

"I can everything under the sun, from mushrooms to baked beans, and I do love to do it, and I never enjoyed any praise I ever got in my life so much as I do that which I get for my cooking. And we have extra people to meals every week, so I can keep pretty well in practice. The women here are nearly all good cooks and I have picked up a lot from them. Then there is nothing I enjoy more

than reading recipes. Every time I see one I read it, and if it sounds good I test it, and if it is good I put it in my cooking card file. That keeps me constantly interested in the cooking business and furnishes many changes for the family.

"I am cheerful because there are no hardships. It is true we haven't much money, but we have twenty sacks of flour upstairs, a whole cellar full of potatoes, vegetables and apples, a pantry full of preserved fruits and jams, chickens and ducks and hams and bacon and fresh pork right on the place, and with an occasional bit of beef we fare very well. Especially when you consider we have all the fresh eggs and milk that we desire.

"Everybody helps everybody else, and from children to granddaddy everybody has to help make a good time for everybody else. Charley has helped all the newcomers out, for they usually arrive bankrupt. He gives them pork and potatoes and other vegetables, and lends them his horses and farm implements. They would all do anything for him. In fact, I have learned many a lesson in generosity from Charley. He has just returned from taking two of our rocking chairs down to the teacherage, for the use of the teacher. It was he who insisted on turning the old schoolhouse into a teacherage for the teachers, which is a step in advance of most country districts and right in the front ranks of progress today; for it makes our teachers independent of the district, not forced to board in a big family of children and put up with what they can get. Charley is a trustee and has been president of our literary society for two years. I organized it and one woman told me that previous to its organization there had been no place to go for the seven years they had been here and that she was just about to give up and have her husband sell the farm. We have dances and games and plays and all sorts of entertainments, an everybody is invited. I don't believe I could stand the pink teas and bridge parties and the straining to keep up appearances that are in the lives of city folks. Thank heaven, I live where dresses never go out of style, and the two highest social virtues a woman can possess is to be able to cook plain things excellently and to add some little talent to the general entertainment. Our lives are real here, from our own fun making to the making of the little coffin to bury the babe of a neighbor. That is what our men did recently, and it was a pretty little white casket, covered with corded white stuff, and as dainty as one could wish. Then we all gathered in the schoolhouse, where the services were held. Don't you think the tears we shed meant something under those circumstances?

"Well, this isn't meant to be an essay on pioneer life, but it sounds like it. I will just have to add that it is a grand life, and the city folks would envy us if they knew how much we are getting out of it that they can never hope to experience.

"I believe there is a great future for this country. It is filling up fast. When we came here, three years ago,



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there was a farm to the west of us, but sagebrush all around. In fact, this farm we are on was sagebrush. Now there are farms on every hand. We can still see sagebrush, if we look far enough to the southeast; but there are only a few coyotes now where there were hundreds before, and no rabbits now where there were millions three years ago. These rabbits shaved down our first crop to the ground—we had no fences then. Then we drank ditch water—boiled, but still ditch water. Now we have a fence all around, a nice, warm house, cool, clear water from a dandy cistern, and no real trouble in the world. Charley began by owning one hog and her brood, and since then he has sold about one hundred, and has fifty fattening to sell."

# HOME ECONOMICS ASSOCIATIONS PROGRAM

Suggested Topics for April:

Gardens and their planting.  
Sanitary milk and its production.

## The Clean Milk Campaign.

The subject of the necessity for producing milk under cleaner conditions than is usually done, has been the theme of the dairy expert of the Extension Division, Mr. Ben R. Eldredge, at many a housekeepers' session, and the increasing interest in the subject makes us feel that the time is ripe for a state-wide campaign. It has become a self-evident fact that men and women must each be respon-

# A HOSPITAL among HOME SURROUNDINGS is as being at HOME come and see us THE SALT LAKE MATERNITY HOSPITAL 447 THIRD EAST

Miss Gertrude Tobiason, Superintendent. Graduate of the Battle Creek Sanitarium and hospital.

## Experts Endorse Beet Sugar

Not only have government experts and scientists declared that beet sugar, highly refined, is the same, chemically, as cane sugar, but the greatest cooks and bakers have also added their endorsement of Table and Preserving Sugar, made from western-grown beets.

AMALGAMATED SUGAR CO.

sible for their share in this movement; that the men must remove the manure which is the breeding place of the fly that carries germs, clean the barns in which the milking is done, see that the men who does the milking is clean, use a safe pail for the purpose, and take all the precautions needed to insure the production of a product fit for human beings to drink raw without danger. The women on their part are responsible for the home care of the article, which includes keeping the utensils sterile, providing a cool place for the storage of milk, and a house as free from flies as possible. Mr. Fred W. Merrill, Dairy Expert for the De Laval Separator Company, has been before the men and women of Utah in the interests of better milk and has offered to co-operate with the Extension Division in having prepared a series of lessons upon subjects relating to milk production with the view of arousing interest in the campaign. We are looking to the women to take the initiative in this movement. We wish that they would make a determined stand against using milk in their own homes that is not produced under cleanly conditions. The conventions of Monroe and Logan passed resolutions in joint session to take up this campaign. To be of value it must begin in March with the men's side of the work. Mr. Jacob Magleby of Monroe offered a prize of \$25.00 for the best kept barn. We hope it will go further and the outhouses and general surroundings will be included. The following are some points from Mr. Merrill's talk which will be taken up in detail in the published lessons.

Milk has elements in itself that prevent the growth of disease producing bacteria during the first eight to nine hours after milking.

Dirt once in milk cannot be strained out of milk. The only strainer fit to use is a piece of cheesecloth folded many times and burned as soon as used.

Milk is one of the few foods taken raw, hence its danger. Not only typhoid but septic sore throat, diphtheria and scarlet fever result from the use of dirty milk.

Pasteurization is a safeguard that should be used by every housewife.

Most of the milk drunk contains liquid manure owing to the condition of the cow's udder and the milker's hands.

## Reports from Associations.

Richfield reports that the Clean Milk Campaign will be taken up by the women. The Association is doing good work in other ways.

Panguitch writes that the Association work is greatly enjoyed and fears that the fact of an outline in Home Economics being put into the Relief Society might obligate them to disband. For the benefit of others who do not understand the situation, we make the following statement. The outline for study is one means of getting the subject before the people. So long as the people wish the Associations to continue, so long will they be continued. There is no reason why one piece of work should in any way interfere with the other.

Delta women have been active in helping with town improvements and will, we are sure, be especially interested in the coming milk campaign.

Hinckley has a fine program of

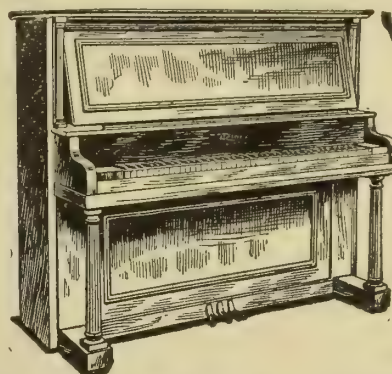


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Our list, with descriptions that would do these instruments justice, is too large to publish. If interested in saving one-half on a Piano or Player-Piano, fill ou the enclosed coupon, and we will mail you a list with full description of these great bargains.

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SALT LAKE CITY UTAH

active work outlined. Several women are working on budgets for their homes. An excellent civic committee has been organized and we feel that this will be another community in which a sanitary milk campaign will bring results.

Monroe had a fine housekeepers' conference. Mrs. Nellie K. Jones talked to audiences of over two hundred women.

Cedar City Home Economics Club has been active in getting ready for the convention. This organization has a membership of over eighty and reports instructive and interesting meetings. There were 240 at yesterday's afternoon session to hear Mrs. Jones talk on the Value of the Potato

in the Diet and demonstrate some methods of preparation.

Richmond Association invited Mrs. C. G. Warren to give a talk on Care of the Hair and modes of dressing same. Mrs. Warren greatly pleased her audience at the Logan Conference.

Owing to the inclement weather, the Conference at Logan was not so large, yet during the stormiest days audiences of over three hundred gathered to hear the speakers. Miss Anna Barrows delighted her hearers with the practical value of her work.

Cinnamon rolls, containing raisins and currants, satisfy the natural craving for sweets and are better for children than cake.





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Established 1904

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**Advertising Rates**—The advertising rates will be sent upon application.

#### OFFICIAL ORGAN

Utah Horticultural Society, Utah State Dairymen's Association, Utah State Bee Keepers' Association, Bear River Valley Farmers' Protective and Commercial Association, Agricultural College Extension Department and Utah State Fair Association, Utah-Idaho Millers' and Grain Dealers' Association, Utah Fruit Growers Association.

#### OUR GUARANTEE

We guarantee every subscriber against loss thru dishonesty or attempted swindle by any advertiser in this publication. We do not attempt, however, to adjust trifling differences between the subscribers and honest, responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within thirty days from date of the transaction, and the subscriber must have mentioned Utah Farmer when writing the advertiser.

Snow slides will be many as soon as the warm weather comes. Those who have occasion to go into the mountains should be careful. Every spring some one pays very dearly for carelessness and often lives are lost in the snow slides.

A good fence is one of the best means of keeping a good neighbor. At this time of the year you can spend a little time in putting your fences in good repair. One weak place in a fence makes practically all the rest of it valueless. Look over yours carefully before the busy spring work commences.

Our attention has been called by Dr. Geo. R. Hill, of the Agricultural College, that, due to the fact of the war, the demand for quicksilver and the price of Corrosive Sublimate, which is made from quicksilver, is advancing very rapidly, and he recommends that dealers and farmers should lay in their supply at once, if they have not already done so.

"All the world loves a doer. Do something worth while, and don't worry about who gets the credit. Those who chase the spotlight find that it is a thankless job. Do something, and the spotlight will follow you, you can't get away from it. Credit will fall where it is due, just as sure as God gave you air to breathe."

As soon as the snow is melted away, you should look carefully to the roads on your farm. See that they are leveled up, and made to shed water. Fill in the low places. If everyone would take

enough interest to care for the roads leading to and around their farms, we would have many more good roads than at the present time.

A great many very successful Round-Ups, Farmers Conventions and Housekeepers Conventions have been held, and are being held at the present time. The knowledge gained by the experts who are studying out these problems; and the practical men who are taking part, is helping to make these gatherings profitable to all who attend. A number of High Schools are taking the initiative, and are planning for these meetings this year. Plans are also being laid for next year in which they hope to profit by the experience of the meetings now being held, in the method of conducting, and the time and places of holding the gatherings.

#### PREPARE NOW.

When the warm sun of Spring comes it will melt great quantities of snow into water and then lookout for floods. Prepare now to take care of the high water. It is but a short time until much of the snow will be moving towards the valleys in a liquid form and unless some way is arranged to take care of these flood waters they will make channels for themselves. Clean out the ditches and canals and provide some place for the flood water sure to come this spring.

#### POSSIBILITIES OF LIVESTOCK

##### FEEDING IN UTAH.

An inquiry has been received recently by the Utah Experiment Station from a Pacific Coast town commending very highly the carcass beef, mutton, and pork that reaches the San Francisco market from Utah points. This only emphasizes anew the great possibilities of Utah as a live-stock State. We are right in the middle of the producing area, and with the finishing of meat which attracts such attention as that mentioned, there is no reason why stockyards and the packing business should not have wonderful possibilities in this section. Those interested should get together and boost for the development of this business.

#### OUR POULTRY BUSINESS.

Only the other day we were told by a man who, because of his experience, ought to know, that one half a million baby chicks were imported into the state of Utah last year. It seems to us that it is time we awakened to the opportunity of producing our own poultry. Why don't you plan now to increase the number of chickens on your farm this coming year?

The modern incubator, through years of experience, has been perfected to such a degree that an amateur in the business ought to get good results, and a person who has had any experience at all, should get splendid results in hatching baby chicks, if they will only be careful in securing the right kind of eggs. We have every natural facility for the care and production of chickens, but it seems that we lack the interest necessary in this branch of farming.

You should produce enough eggs and meat for your own use, if you do not do anything else in the chicken business. We have a number of people in the state who are making a success with poultry but we do not have enough people who are giving it the attention necessary to greatly increase our production. We should produce more poultry and eggs.



DR. ELMER G. PETERSON NEW PRESIDENT  
OF UTAH AGRICULTURAL COLLEGE.

At a recent meeting of the board of trustees of the Agricultural College a new President was selected to succeed Dr. John A. Widtsoe. A number of candidates were considered, final action resulting in the election of Dr. E. G. Peterson.

Dr. Peterson will go into the office with the unanimous support of all the trustees.

His salary will be \$4000.00 a year, the use of the President's residence and official automobile. He will take the office on September 1, 1916.

Elmer George Peterson will be one of the youngest college presidents in the United States. He was born in Plain City, Utah, thirty-four years ago, and his rise in his chosen field of work, agriculture, has been rapid. Following a common school education, he went to the Utah Agricultural college in Logan. He graduated from the college with the class of 1904, with high honors.

The year following his graduation he was assistant professor of zoology and entomology, under Dr. E. D. Ball, who is now director of the experiment station.

Desiring to further broaden his education, young Peterson then entered Cornell university, where he took postgraduate work in science and agriculture for two years. He graduated with a degree of doctor of philosophy, specializing and securing his doctor's degree for work in bacteriology.

While attending Cornell, Dr. Peterson kept in close touch with his alma mater. During the summer months he came back to Logan and assisted President Widtsoe in preparing publicity matter for the college. He also took a short special course in the University of Chicago.

Upon completing his studies at Cornell, Dr. Peterson went to the Oregon Agricultural college, where he was professor of bacteriology. After being there only a short time, he was appointed professor of bacteriology at the Logan school. He remained in that department until the late L. A. Merrill resigned as head of Extension Division, Pres. Widtsoe appointed Dr. Peterson to this position. In that position he has done highly effective work, making the extension work of the Utah school as effective as any in the U. S.

Dr. Peterson was married in Logan about a year and a half ago to Miss Phoebe Nebeker. They have one child.

The Utah Farmer wishes him success.



## Saving Money With Correct Lubrication

Every year added to the life of your Ford car through correct lubrication, affords increased pleasure and saves you money. Add this to the extra amount you'll get on resale, because of the perfect condition of your car, and the result will show what—



## SIMPLEX "FORD" SPECIAL AVTO OIL

will do for your automobile. This oil is especially refined for Ford cars. Makes good at all temperatures. "Every Drop Counts."

**Utah Oil Refining Co.**

Refiners  
Salt Lake City, Utah.

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There can never be any question about ownership, when an animal shows a "Perfect" Ear Tag with number of animal and name and address of owner stamped thereon. And any owner who neglects to so identify his stock, has no one to blame for losses except himself. The return of one good steer will pay for "Perfectly" tagging 2,000 head.



The "Perfect" Tag should be used because it is the lightest tag manufactured; made of aluminum; non-corrosive and non-poisonous. It can be attached to an animal's ear instantaneously, in one operation. No danger of squeezing the ear or causing inflammation. This ear tag is endorsed by stockmen all over the United States.

Send for FREE Sample Tag and Prices today.  
Salt Lake Stamp Co., Salt Lake City, Utah

## 13 HOME BRED

### Registered Percheron Stallions

Buy home bred, climated stallions as cheap as horses of the same quality can be bought in the east.

Also offer for sale a few head of registered Percheron mares.

Also have for sale 300 choice registered Rambouillet Rams and 300 registered Rambouillet yearling ewes.

Also offer two tons of extra choice Canada Field Peas in lots of 100 lbs. and up, at 3 1/2 cents per pound, f. o. b. Collinston. Check with order.

**ACME STOCK FARMS**

**W. S. HANSON, Prop.**

Collinston Utah

Mention Utah Farmer when you write.

## POULTRY

### IMPROVING THE FARM FLOCK—FEEDING CHICKS OF ALL AGES.

Missouri Experiment Station.

Improvement with farm animals comes from proper methods of selection and breeding. Feeding enables the animal to do its best, but its ability is determined by its breeding. This being true, it will be seen that failure often comes through improper methods of breeding.

If the proper selection and matings are made for the breeding yards, the flock next year will be better than this year. If improper selections are made, the flock will not be as good as this year, and if eggs for incubation are taken from a mixed flock in a haphazard manner, haphazard or uncertain results will be sure to follow.

One mistake often made is to set the first hen to go broody in the spring. The best hen there is on any farm is the hen which lays during the winter season, and she is usually the first hen to go broody in the spring. About the time the winter layer goes broody, the non-winter layer begins to lay. By setting the first hen to go broody in the spring on eggs from the flock, usually means that the good winter layer is set on the non-winter-layer's eggs, and as a result, the good winter layer spends three weeks incubating the eggs and perhaps six weeks brooding the chicks. The final results are that the good hen has spent about nine weeks raising a brood of chickens from the poor hen; therefore, none of her eggs have been used for incubation.

The better plan is to select the good winter layers and place them in a breeding yard with a good male, and by using their eggs for incubation, we can raise chicks from the good hens, which will improve the egg production of the flock.

Where incubators and brooders are used, it is easier to get chicks from the winter layers, for incubation can be done earlier in the season, and before the poor layers begin to lay.

In order to secure a good hatch of strong chicks, care should be used to select eggs which have good shell texture, and uniform in size and shape. One reason why a hen which steals her nest usually hatches a good percent is that the eggs are all uniform. No one can get a good hatch from an incubator if the eggs are large and small, long and round, and have thick and thin shells.

The results of many tests at the Station indicate that from ten to twenty females with one male gives better fertility than a larger or smaller number; the larger breeds, ten; the medium, fifteen; and smaller ones, twenty females with each male. A sterile hen will produce fertile eggs in about three days after a male is placed in the pen, and the eggs will remain fertile often for twenty days after the male has been removed from the pen. Cockerels mated with hens and cocks with pullets usually give best results.

### Feeding Chickens of All Ages.

Many methods of feeding are successful. The following rations have given good results:

#### First Day.

Yolk in body supplies food. Do not feed.

#### First Week.

Boiled egg cut fine, bread crumbs and oat meal, equal parts. Feed in form of mash on clean board all they will eat in 20 minutes five times per day.

Give sour milk each forenoon and water in the afternoon.

Keep fine grit or sand before them.

#### One to Five Weeks.

Equal parts wheat bran, shorts, oat meal and corn meal.

Use as mash in hopper and give good grade of commercial chick feed in litter.

Two pounds fine charcoal and one half pound fine salt should be added to each hundred pounds mash.

Sour milk or water should be before birds at all times.

#### Five Weeks to Maturity.

1 part ground oats.

1 part shorts.

1 part wheat bran.

1 part corn meal.

1/2 part beef scraps.

1/4 part bone meal.

Use this as mash in hopper, and give equal parts cracked corn and wheat in litter, all they will clean up in thirty minutes, twice each day. Fresh water and grit should be before them at all times. Free range should be provided.

#### Fattening Ration.

2 parts corn meal.

1 part shorts.

1 part wheat bran.

Moisten with sour milk. Give cracked corn as grain, all they will eat. Clear water and grit should be provided at all times.

#### Balanced Egg Ration.

	Yolks	Whites
100 pounds corn.....	255	134
100 pounds wheat.....	243	182
20 pounds oats.....	39	31
20 pounds bran.....	31	41
20 pounds shorts.....	41	44
20 pounds corn meal.....	50	27
20 pounds beef scraps.....	21	221

Total .....680 680  
2 lbs. charcoal and 1/2 to 1 lb. salt should be added to each 100 lbs. of mash. Fresh water, grit and oyster shell should be provided at all times.

#### Moulting Ration.

Give half ration for two weeks or till birds are poor, then build them up rapidly. Balanced egg ration good.

#### Breeding Ration.

Corn and wheat, equal parts, fed in litter night and morning, about a pint to ten hens. Mash given in Balanced Egg Ration given in afternoons. Free range, grit, oyster shell and fresh water should be provided at all times.

## FOR SALE

Registered Holstein Bull

A prize winner.

Address

**DALLAS HOLLEY**

Phone 213-J-2 Mapleton, Utah.

Registered Jersey cow for Sale. Owing to overcrowded conditions, am offering for sale a limited number of Registered Jersey Cows, heifers and Royally bred Jersey yearling bulls. A splendid opportunity for any desiring choice stock. Relf Farm, below 14th South on Holiday Car line or call Geo. O Relf, Hotel Utah.

## RELIABLE FARM BARGAINS

THIS IS THE BEST YEAR IN WESTERN FARMING. If you're ever going to buy a farm DO IT NOW!

36 acres of good farming land. House, barn and other outbuildings. City water, electric lights. Price only \$3500 on good reasonable terms.

160 acres near Elwood, Box Elder county. Located right on the main railroad line, and only quarter of a mile from station and beet dump. Abundance of water goes with the place. 8-room house, large barn, etc. Will sell all or part of this place. Only \$135 per acre on terms.

54 acres near Salt Lake City. 4-room brick house and good outbuildings. Ample water from Jordan canal. Land all under cultivation. This is some of the best farming land in the country. Five Jersey cows, two registered. Good team of horses; pigs, chickens plow, wagon, and all necessary machinery to run the place. Only \$158 an acre, including everything. Good terms, or will trade for Salt Lake City property.

640-acre dry farm in Box Elder county, close to railroad. Small payment down and balance in 10 yearly payments. A bargain.

80 acres of good land in the Bear river valley. 4-room new frame house, 4 good horses, 2 sets harness, 1 wagon, 1 white top buggy, mower, rake and plow. This land has a full water right from the Bear River canal and is only one mile from town. The place is now rented for \$1440 cash each year. Price only \$165 per acre on good terms, or owner will trade for good city property.

We trade city homes for farms. Let us know if you want a farm or ranch, large or small. We will get it for you and guarantee satisfaction.

Phone NOW—Wasatch 963.

## KIMBALL & RICHARDS

"Land Merchants."

56 and 58 Main Street.  
Salt Lake City, Utah.

Sudan Grass Seed—Recleaned—Certified  
10 lbs. \$1.00, 25 lbs. \$2.00, 50 lbs. \$3.50,  
100 lbs. \$6.00. F. O. B., Lubbock, Texas.  
ACME SEED CO.

## HOW WE PRODUCE OUR SEED POTATOES

We, like other seed houses, have had considerable trouble to find suitable seed potatoes, stock we could recommend free from disease and which would be of special merit as to reproducing itself and we made up our minds to offer our customers stock that is true to type, color and size.

The Government has established a station for the production of pure, clean and suitable seed potatoes at Jerome, Idaho. A visit to the station convinced us that they had some clean stock which we wanted and we bought what they could spare, planted them on new sage-brush ground, watering them once, dried them up the latter part of July and harvested them the middle of October and got a yield of 40 bags per acre, none larger than hen eggs. Now we have a stock as firm as rocks, perfect in type and absolutely free from disease. We planted 45 acres of this seed stock on old alfalfa ground and produced 260 bags per acre. We also selected three varieties and sent them to the National Potato Show at Michigan and were awarded the first prize on each.

If you want potatoes of special merit, potatoes that will make you money, write us.

**VOGELER SEED CO.**  
Salt Lake City, Utah.



# Co-operation of Farmer and Manufacturer

Synopsis of a Talk Given by R. W. Eardley, Secretary of Manufacturers' Association of Utah, at the Logan Round-Up.

I have followed with much interest the splendid work which has been done during the last few years by the Agricultural College of Utah. We have here, an institution which is bringing education in its practical forms to the masses of our people, and which is furnishing them scientific facts that can be applied to their everyday affairs, not only to their own advantage, but to the advantage of this commonwealth. This institution is not only making it possible for you gentlemen and other people engaged in agricultural pursuits in this state to make two blades of grass or grain grown where but one grew before, but it is teaching you how to make a million blades of grass or grain grow where none grew before. The work of this institution has received the favorable attention of educators and people engaged in agricultural pursuits in other parts of the world, and men from foreign shores have traveled thousands of miles for the purpose of studying first hand, the results which are being obtained along agricultural lines in this state. It is the duty of the state not only to maintain this institution in its present state of high efficiency, but to provide it with ways and means to continue the very satisfactory progress that has been attained by it in the past.

I have been interested in the discussions of the Round-Up, not because my work calls upon me to till the soil, but because I realize that the development of the towns and cities of the state will be measured by the progress made in agricultural lines, very largely. A town can grow no faster than the territory surrounding it, which it is able to serve.

I believe that you gentlemen are just as much interested in the development of manufacturing industries in Utah as we are in the development of the farming communities. As we develop the manufacturing industries you will be furnished with better markets for your products. Mr. Allen, who has spoken to you this morning, has said in substance, that the value of your farms is in proportion to the market. This means, I take it, that if the market is near to the farm and the road leading to it in good condition, the value of the farm will be very much greater than if it is necessary to ship those things which you produce to markets a long way off. I believe that we have a practical confirmation of this fact right here in Cache Valley. It is an admitted fact that since the sugar factories, the condensed milk factories, and other manufacturing establishments entered this valley the farm lands have increased in value at least 100 per cent. We estimate that every time a sugar factory is built the farm lands within hauling distance of the factory increase in value at least as much as the cost of plant. This means, for example, that if the sugar factory in Logan cost \$600,000.00 the farm lands within hauling distance of the factory, because of the factory, increased in value \$600,000.00.

I have been told by one of the

gentlemen who has been active in this Round-Up that farming today is strictly a business proposition; that you gentlemen are devoting your time to a study of the questions proposed in your program for the purpose of increasing the revenue derived from your farms. It is proper that you should do this. This is an age of conventions, and bankers, manufacturers, merchants, and other business institutions get together from time to time for the purpose of discussing their various problems, that they may become more efficient and make greater progress in the respective lines in which they are engaged. In the last analysis of things, we are dependent upon the farmer; and therefore it seems to me that no conventions could be more important than a convention of farmers who are endeavoring to make the work on their farms more efficient.

But why should we endeavor to make more money unless, as the result of the gain, we are able to have more comfort and convenience in our lives? We are justly entitled to plenty of good wholesome food, to sufficient soft, warm, comfortable clothing, to good homes, good churches, good schools, good amusements, and all the other things that go to make life convenient and happy. These comforts of life come usually to people who live in communities. Many of the conveniences of modern life are not possible to people who live in sparsely settled regions. For example you are desirous of having good transportation facilities; you desire frequent railroad service; you wish inter-urban lines built into your towns. Such conveniences can only come and be made efficient as the country builds up; and to build up a country we must have institutions that can take the raw products of the country and of the farms, and turn them into various articles for the use of man. We must have creameries, and condensed milk factories to buy your milk; sugar factories to consume your beets; packing plants to furnish a market for your hogs and live stock; canning factories to take your fruits and vegetables. So you see the factory is really a potent factor in determining the ultimate development even of our rural communities.

Our factories help you in another way. They furnish employment to the thousands of people who must buy other products which you have to sell.

After all, then, the development of this state depends upon co-operation in its truest sense. The farmer co-operating with the factories, and the factories co-operating with the farmer; the rural communities co-operating with the cities, and the cities co-operating with the rural communities. Co-operation between all the different forces of the state is the key that will unlock the door to permanent prosperity.

The Manufacturers' Association of Utah feels, therefore, that it is appropriate and right to be represented on this program. It feels that it

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The Oldest Seed House West of the Mississippi River.

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In Bulk and at Bulk Prices!

VEGETABLE seeds, flower seeds, bulbs, slips, vines, shrubs, berry plants, fruit trees—everything for the garden. Barteldes' seeds have grown prize-winning products for upwards of 50 years. Get our beautiful new 1916 catalog with lowest prices for garden and flower seeds in bulk and packet, together with Pink List giving prices of all field seeds in quantities.

**Famous Collection of 5 Packets for 10c**

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BARTELDES' DENVER MARKET LETTUCE,  
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BARTELDES' BLOOD TURNIP BEET,  
TALL MIXED NASTURTIUM, all for 10c.

together with 25c coupon which when returned to us will be accepted as 25c cash payment on any order of \$1.00 or more. With \$3.00 orders we will also send your choice of Barteldes' interesting new books of handy reference, the Farm Guide or Cook Book. Write to nearest address.

535 Massachusetts St., Lawrence, Kansas  
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We receive many letters similar to this:  
"Last season I installed a Queen as an experiment. It hatched 18 per cent better than eastern made machines and 11 per cent better than any other machine made in the west. All machines were run under exactly the same conditions. I recommend the Queen to everybody inquiring which is the best, and especially to beginners."  
—John Bowen, Littleton, Colo., Colorado Poultry Fanciers Association.  
The Queen is built to run without trouble and to outmatch other machines. Book free.  
**Queen Incubator Co.**  
1628 Bryan Ave., Lincoln, Nebraska

Queen Incubator Sold by PORTER-WALTON CO., Salt Lake City, Utah.

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We will send any boy or girl taking an active part in a Boys-Girls, Mother-Daughter or Father-Son Club



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The U. S. Department of Agriculture is training young folk to be practical business farmers. You can earn spending money producing club products and perhaps win a fine prize also. We have some splendid plans for club members. You ought to know about them. Write today for our free book, "The Farmers of the Future."

**The Farming Business**  
Dept. 21 500 N. Dearborn Street Chicago, Ill.

is proper for its representative to appear before you gentlemen and look you squarely in the eye, and tell you that we believe you should help build up Utah's industries by supporting them through your patronage. It is to your own interest to support the local merchant, the local jobber, and the local manufacturer. It is the only thing to do if we are to continue to grow and develop and become the great state which a very kind Providence seems to have destined us to become. By sustaining each other we can develop the resources of Utah. We can all be prosperous. We can all enjoy the comforts and conveniences of life. We can have good homes in which to live; good clothes to wear; good food to eat. We can send our children to the best schools in the land. We can worship in comfortable churches. We can have good amusements and enjoy a life that is wholesome and happy, and that will develop all the better qualities of true manhood and womanhood. Let us co-operate and make Utah a bigger and better state.

## Cut the Cost



**Martin**  
FARM DITCHER AND ROAD GRADER  
PAT. MAR. 2, 1915

## Of Ditching

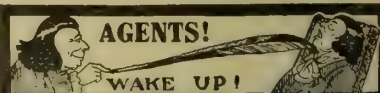
Drainage and irrigation ditches are easily made and cleaned out with this improved light draft ditching machine. Makes V-shaped ditch with a slope of 45 degrees—sides won't cave in. Unequaled for hill-side work, road grading, terracing, building levees and borders. Reversible—easy to operate.

**All Steel, Simple, Practical**

No wheels or levers to break or get out of fix. Lasts a lifetime. Quickly pays for itself. Price only one-fifth of big clumsy machines—does same work. Thousands of satisfied users throughout the United States.

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SALT LAKE CITY UTAH

**ISN'T IT ODD THAT—**

Cold cash has burned many a pocket.

Among other things, a forger appreciates a good name.

Many a man carries a mortgage because he is unable to lift it.

The less a man needs credit, the easier it is to get it. Unto him that hath shall be given.

If the hands become stained, lemon juice will make them white.



# THE FARMERS' MARKET PLACE

**For the Buyer**

This market place offers our subscribers and readers a very good place to advertise. If you have something to sell or want to buy here is the place to tell it. These advertisements are read because they offer bargains, your bargain should be here. Take advantage of this opportunity today.

**For the Seller**

## THE GEM HERD.

### Improved Chester White Swine

The Home of the Western Prize Herd  
My winnings at Idaho State Fair 1913, were 13 first, 3 seconds, champion boar and sow, and champion fat barrow. At a Tri-County fair held at Jerome, Ida., I took all but one second. I have anything wanted in Chesters from a weaning pig to a champion boar or sow at prices all can afford. High class stock. Write me.

For Reference—all old customers.

**GEO. H. LAWSHE.**

Falls City, Idaho

## FOR SALE

Foundation Stock in Holstein Fresian's and Duroc Jerseys. Will exchange a few for hay or grain. For breeding and particulars write

**JOHN W. STUBBS**

R. D. No. 2. Provo, Utah.

## Percheron Stallion

An unusual opportunity to purchase a good stallion. Foaled June 1913. Utah bred. Sire imported Damocles. Very large and finely developed. Direct all inquiries to B. T., Utah Farmer, Lehi, Utah.

## EGG MACHINES.

Our Leghorns are truly worthy of the name. Hardy Laying Paying Strains. We are offering the biggest chick bargain of the season—try us and be convinced. Ask for circular. **MANTI MAMMOTH HATCHERY CO.** Manti, Utah.

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100	\$ .90
200	\$ 1.25
500	\$ 2.00
1000	\$ 2.75

Send all orders to

**THE UTAH FARMER**  
LEHI, UTAH

**BABY CHICKS & HATCHING EGGS**  
White Leghorns, Brown Leghorns, Barred Rocks, R. I. Reds, Black Minorcas, Anconas, Buff and White Orphingtons. Prices on application.

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## FOR SALE

13 Registered Hereford Bulls. Also some females, 7 Registered Berkshire Boars, 20 bred sows, 2 Registered Angora Bucks and several Does. Also a fine lot of grade steer calves. Farm three miles north of Ephraim. Visitors met by appointment in Ephraim.

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Kergo Farm Ephraim, Utah

First class Jersey calves for sale, CHEAP. Also one 2 year old bull and the old herd bull. All registered.

Apply to

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St. School for the Deaf and the Blind. Ogden, Utah.

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Single Comb White Leghorns. The kind that pay for five or six years. Especially bred for long profitable service. Send for booklet. Early orders insure your wants.

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R. D. No. 2 Brigham, Utah

## 4—BEST LAYING STRAINS—4

Rose Comb Rhode Island Reds and White Wyandottes, Single Comb Black Minorcas and White Leghorns. Egg fertility and stock guaranteed. Write your wants. E. C. Blanpied, Box 60, Milford Utah.

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A BARGAIN

"SEE ME."

160 acres good land South Jordan; would come under ditch later. Why go hundreds of miles and pay more for poorer land? Only \$20 per acre. Right party can have same without any cash payment and on their own terms.

640 acres good land in Rich county, water right, 60 acres in hay, fine for hay, grain and ideal stock proposition. Take it for less than half what it is worth, \$15 per acre. Easy terms, or might take city property.

6400-acre cattle and sheep ranch in Montana, lot of first-class land, fine range, \$25 per acre. Terms.

Have good improved ranch in Wyoming, well stocked, independent water right, all stock and implements go. Take it for \$35,000. Terms.

**GEO. W. DANLEY**

Was. 2989. 707 Walker Bank Bldg.

## Money to Loan

On improved farms with primary water rights, at reasonable rates."

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**DRY-FARM MANAGER** wants position. Has good knowledge of farm practice feeds and live stock; dry farm crops, climate requirements; equipments etc.; technical and practical knowledge of oils and manipulation for crop production in dry regions. Will go anywhere; am single, sober, experienced, willing to work, business like and bound to make good; age 30; best of references. State wages you can give. Address A. D. care of Utah Farmer.

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One, German Coach, seal brown, weight 1600. Both imported and registered. Will trade for horses, cattle, or cash.

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**WANTED** to hear from owner of good farm for sale. Send description and cash price. R. G. List, Minneapolis, Minn.

Farmers, attention; save money by sending for guaranteed home garden combination offer. Crandall, 1110-19th St., Denver Colorado.

**TREES.** Thousands. We sell direct, save 50 per cent. Write for Planters Catalog and Prices. (No Agents) 25 years in business.—Carlton Nursery Co., Carlton, Oregon.

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**JOB PINGREE**

Ogden Utah

When all the farm work's over

When ends the Autumn day,

'N when the milkin's finished

'N stock is fed—well say,

The feelin' leaves a feller

That's urg'in' him to rove,

While sittin' round the kitchen

A gassin'—by the stove.

The outside air is coolish

'N kinder sharp—but pshaw!

Indoors the kettle's hummin'—

Your heart jest starts to thaw,

'N warms up with the spirit

Inside the homelike cove;

While sittin' round the kitchen

A gassin'—by the stove.

The sizzlin' food that's cookin'

Has got a sweeter smell;

The woodbox in the corner

Where chirpin' crickets dwell,

Gives up its woodsy odor,

The fragrance of the grove,

When sittin' round the kitchen

A gassin'—by the stove.

There's mighty little worry

To make a feller gray,

The spirit of contentment

Jest fills the house, someway;

'N everybody's happy,

The real home ties are wove,

While sittin' round the kitchen

A gassin'—by the stove.

—H. M. Railsback.



**CONCRETE FENCE POSTS.**

We have had some questions about concrete fence posts. The following article by Ray B. West of the Utah Agricultural College will answer all of them.

"Taking everything into consideration I feel justified in recommending only two of the four molds used in our experiments. These molds make a post of practically the same size, and same form, being about two-thirds round and the rest flat; they are larger at the base than at the top, being three inches in diameter at the top and five inches at the bottom. A seven-foot post weighs about seventy pounds. They are reinforced with one-quarter inch rods in the four corners. The posts were made by students and no special care was exercised in order to get a fair result. The mixture used was as follows:

The sand used was of good quality and passed a one-quarter inch sieve; the gravel passed a three-quarter inch sieve. The proportions were one part cement, two sand and three gravel.

**How They Stood Tests.**

At two months old and supported at each end, supports six feet apart gave a distributed load of .731 pounds. This test was made with the flat side down, round side up.

At three months old, loaded as above, supports six feet apart gave an average stress of 1,125 pounds. Two of these posts stood up under a load of seven men without breaking.

By loading the posts as a cantilever or by clamping them two feet from the large end and loading them at the free end, five feet from the support, they stood an average load of 227 pounds. This test was made over the solid iron table of the testing machine, while under ordinary conditions with the post in the ground in a yielding material, one would expect them to stand more. The latter test is similar to setting the post two feet in the ground and then trying to push it over by applying force at the top.

It must be understood that in making these tests the loads were applied very gradually and without shock. Concrete will not stand much of a shock. In fact, we can not recommend one of the molds we have here because the posts made from it are too large; dropping them a very short distance on the soft lawn sod would break them.

**The Cost.**

The cost of the posts will be approximately as follows:

	Each.
One yd. gravel at 80c will make about 40 posts.....	.02
1 sack cement at 70c will make about 7 posts.....	.10
Reinforcement .....	.08
Labor .....	.2½
	22½

By furnishing your own gravel, and labor the cost would be about 18c a piece.

**How to Fasten Wire to Cement Posts.**

The posts can be removed from the molds in 24 hours, and the forms used again. Staples or twisted wire can be placed in the posts while they are being made to fasten the fencing to, but the better way with these partly round posts, is to set the fence along side of the flat face of the posts, and with a specially made tool for the purpose twist a short strip of wire

around a strand of the fence, then draw it around the circular back of the post and take another twist on a strand of fence wire. This insures a tight connection. It is the same method as used in fastening telephone wire to the insulators.

**LEAD POISONING.****(Paint Poisoning)**

Dr. H. J. Fredrick, head of the Veterinary Science Department of the Utah Agricultural College is authority for the following article.

Many animals, principally cattle, are lost each year as a result of leaving paint can or buckets around the corrals or in places where cattle are kept. Again, where animals have access to garbage or refuse dumps they often find empty paint receptacles and often get fatally poisoned. Old paint buckets or cans or scrapings of white, yellow or red lead—in fact lead of any form—that has been left over from painting is thrown out with the garbage or the manure where it will last for years, and finally animals will find it and lick it thus causing their death. The sweet taste of some of the compounds seem to offer an attraction to animals.

There are two kinds of lead poisoning—the acute and the chronic. The greater the amount absorbed the more acute will be the symptoms, whereas in the chronic form sometimes very little has been absorbed and animals may recover.

The Symptoms of Lead Poisoning: There is a shortening of breath, paralysis of the extremities, and often the tongue, so the animal is unable to swallow, and where it runs a chronic course a blue line is found on the gums along the teeth. They may show blindness, stupor, coma, convulsions, or delirious excitement, fits occurring at intervals, cattle bellowing, pressing the head against solid objects and pushing with all their might often bellowing at the same time. Animals are at first constipated and may later be affected with a diarrhoea, the feces containing pieces of mucus of a black, fetid color. There is usually profuse salivation (slobbering) and muscular cramps. In cases there is a suppression of milk and the urine.

Treatment for Lead Poisoning: In the treatment of lead poisoning the first object is to prevent further solution of lead in the stomach and intestines and to carry it off. Sulphate of magnesium (epsom salts) or other forms of sulphate may form an insoluble with the lead and help carry it out of the digestive tract. Sometimes dilute sulfuric acid is given for the same reason, but where a sufficient amount of lead has been taken in and absorbed there is no method of saving the animal and it is often a human act to destroy it.

Beware of lead in all its forms where animals may have access to it.

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Mary had a little waist,  
'Twas puzzling to her beau,  
For everywhere the fashion went,  
Her waist was sure to go.

Sometimes it was beneath her arms,  
Sometime below her knee,  
Sometimes she had no waist at all  
So far as he could see.

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VOLUME XII; No. 31 LEHI AND SALT LAKE CITY, UTAH MARCH 4, 1916

## Rope Work---Let The Boys Learn How to Tie a Knot

Prof. J. C. Hogenson.

**Whipping:** Place a piece of strong string about three feet long on the rope allowing the end "a" to hang about two inches over the end of the rope. Now make a loop by passing the other end of the string "b" down the rope and allowing a loose end of about two inches. Grasp the rope with the left hand in such a manner that the thumb can be placed on both strings as at "x" in Fig. 2. Then with the right hand grasp the loop of the string at "y" and wrap it down the rope over itself and the other strand, Fig. 3. Continue the wrapping as far as desired, then draw up the loop and tighten; tie by pulling on the ends "a" and "b" (Fig. 4) with finish as in Fig. 5.

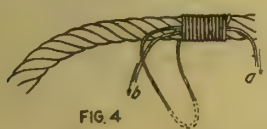


FIG. 4

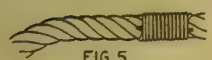


FIG. 5

**Square Knot:** Cross the ends of the rope. Move end "b" under the left rope and again cross the ends as in Fig. 10. Move end "a" around and under "b" and then tighten as in Fig. 11. This knot is especially good for strength.

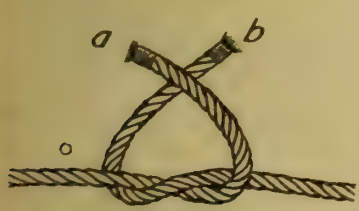


FIG. 10



FIG. 11

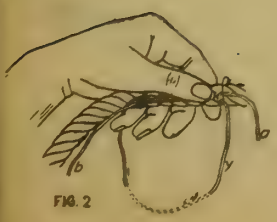


FIG. 2

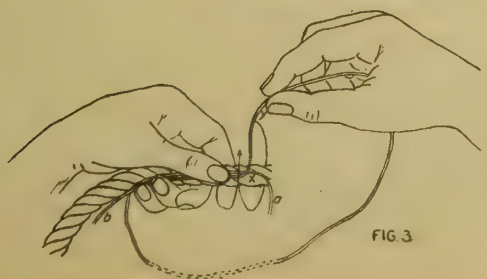


FIG. 3

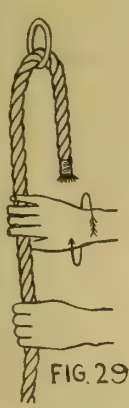


FIG. 29

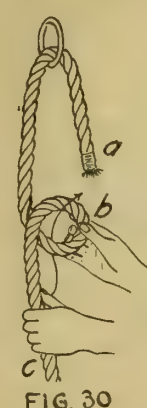


FIG. 30



FIG. 31



FIG. 32



FIG. 33

**Bowline Knot:** Place the rope around a tie post or through a ring and with the right hand make a loop as indicated in Figs. 29 and 30. Pull the lower end of the rope through the loop (Fig. 31) and bring the end of the rope "a" through the loop of the slip and fold it back upon itself and jerk the lower end of the rope as indicated by arrow in Fig. 32. Fig. 33

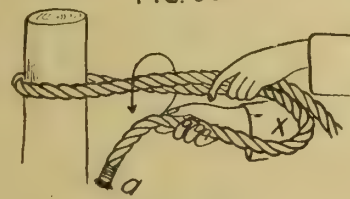


FIG. 67

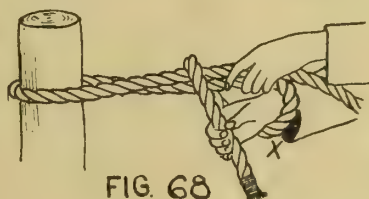


FIG. 68

**Manger Knot:** Pass the end of the rope around a tie post in a clockwise direction. Hold both ropes firmly with the left hand and with the right hand throw the short end over both ropes as indicated by the arrow in Fig. 67. Put the right hand through the loop thus formed and pull the rope back, tightening it in such a way as to form a second loop (Fig. 69). The end of the rope is thrown over the main rope and brought down through the loop to finish the knot (Fig. 70). Fig. 71 represents the knot improperly tied.



FIG. 69

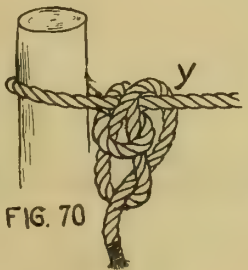


FIG. 70

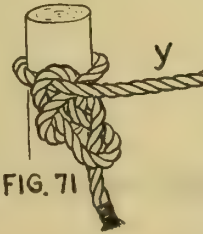


FIG. 71

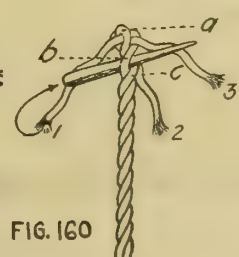


FIG. 160

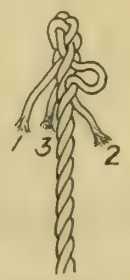


FIG. 161

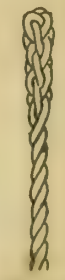


FIG. 162

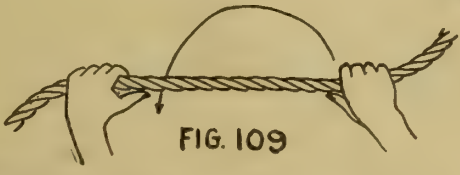


FIG. 109



FIG. 110

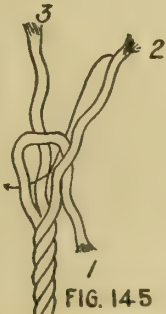


FIG. 145



FIG. 146



FIG. 147

**Clove Hitch:** Hold the rope in both hands (Fig. 109) and make an under loop with the right hand (Fig. 110). Now hold this loop or half hitch rigidly with the left hand; with the right hand throw another loop (Fig. 111). Slide the loop last formed "z" over the first loop "y" as shown by the arrow. The finished knot (Fig. 112) is very useful in fastening derrick ropes, guy ropes, etc.

**Crowning:** Unlay the end of the rope and place strand No. 1 between strands Nos. 2 and 3 as indicated in (Continued on page 2)



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## ROPE WORK—LET THE BOYS

LEARN TO TIE A KNOT.  
 (Continued from page 1)

Fig. 145. Pass strand No. 2 around the loop formed and in front of strand No. 3. Now thread through the loop with strand No. 3 as indicated by arrow in Fig. 146. Pull all the strands tight. Keep the twist of the strands and weave them back, over and under the nearest strand as shown in Figs. 160 and 161. After this has been done two or three times, remove a part of each strand to produce the tapering effect shown in Fig. 162.

**Loop Splice:** This splice is used particularly for making halters. Raise two strands of the rope and pass the lead end through the opening formed

(Figs. 163, 164) at right angles to the direction in which the strands are laid. Great care should be exercised so as not to thread the rope as indicated by the dotted line. Now raise two strands in the end "a" (Fig. 163) and run short end "b" through the opening and tighten both ends to finish the splice (Fig. 165).

**The Eye Splice:** (Used for halters, derrick ropes, etc.) Untwist the end of the rope and place strands Nos. 1 and 2 on top of rope and No. 3 to the side on the right as in Fig. 166. Place strand No. 1 under strand "a". Then pass strand No. 2 over "a" and under the next strand "b" (Fig. 167). Now turn the eye of the rope to the left (Fig. 168) and pass strand No. 3 under strand "c" in such a way that



FIG. 163

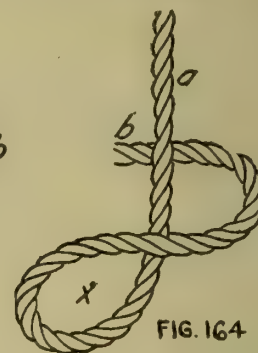


FIG. 164



FIG. 165

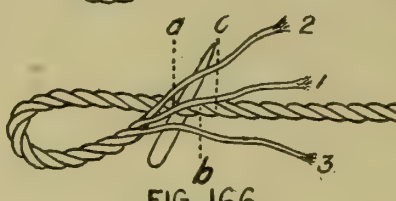


FIG. 166

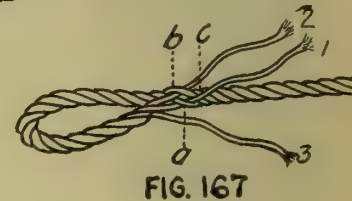


FIG. 167

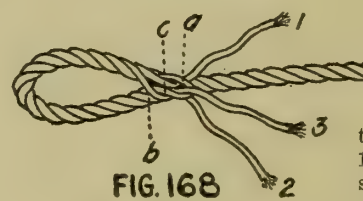


FIG. 168

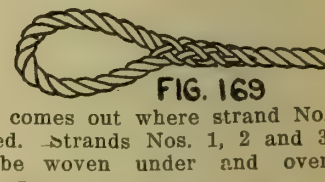


FIG. 169

the end comes out where strand No. 1 entered. Strands Nos. 1, 2 and 3 should be woven under and over

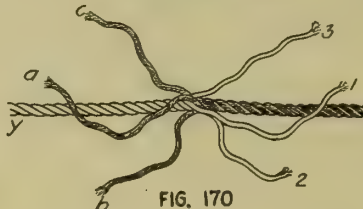


FIG. 170

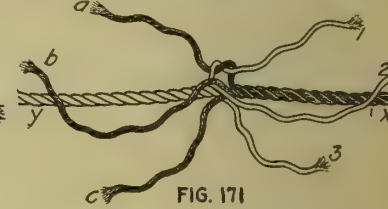


FIG. 171

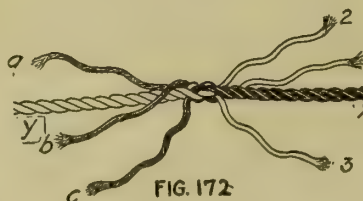


FIG. 172

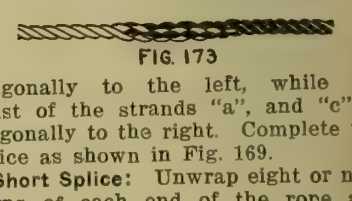


FIG. 173

diagonally to the left, while the twist of the strands "a", and "c" is diagonally to the right. Complete the splice as shown in Fig. 169.

**Short Splice:** Unwrap eight or nine turns of each end of the rope and

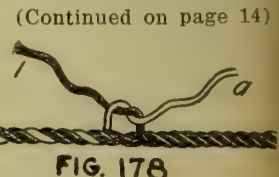


FIG. 178

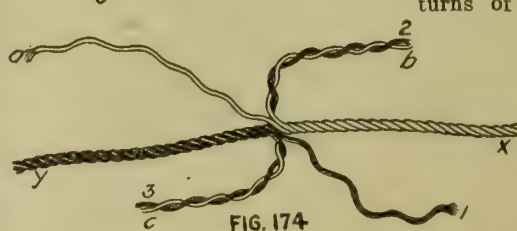


FIG. 174

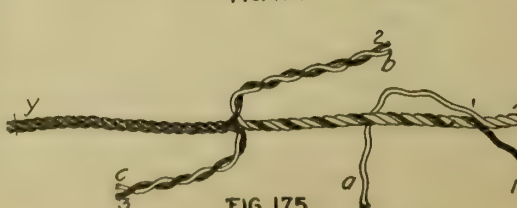


FIG. 175

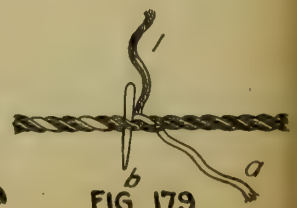


FIG. 179

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VOLUME XII. LEHI, UTAH, SATURDAY, MARCH 4, 1916 No. 31

## The Nephi Harrow

By J. W. Paxman, Extension Specialist in Dry-Farming for the Utah Agricultural College.

Since the application for a description of the home-made harrow mentioned in the equipment for a dry-farm have become so numerous, I present the following which will answer all the inquiries.

The accompanying cut is a diagram of the 16 foot home-made harrow mentioned in my article as published in the Utah Farmer of January 15th. It can be made of any kind of good solid wood, providing the weight is kept about the same as designed in this description, but preferably oak, maple or locust. The timber need not be absolutely smooth, although the description of the one shown here and the size of the bolts given, contemplates the material milled and finished, so that a coat of paint can be applied.

It is constructed so that any man of ordinary skill can build it, being nothing but plain material and put together entirely with bolts. Braced as it is, it is most rigid, and if the harrow teeth are driven down to measure 5½ to 6 inches below the frame, it will do good work. The teeth can be driven out and sharpened at any time and again replaced, there being enough material in the 12 inch teeth to last for many years with ordinary use. It will pay to sharpen the teeth often and to be sure and keep the right temper in them, keeping the corners square and the end well pointed, so they will literally cut every inch of the ground. It is also one of the most effective harrows for clearing the newly plowed lands of brush; but it requires some hard work to dump it. A single section can be drawn with two or three smaller horses, while two sections attached with a draw bar can be handled with four or five horses, according to the size of the horses.

The draw bar can be of any strong material made by the farmer, or can be made of hardwood about 2 in. x 6 in. x 14 in. and can be attached to the harrows by means of four of the clevises shown in the cut, which are made of ½ in. or ⅝ in. bar iron with straps of iron ¼ in. x 1¼ in. to fit against the edges of the draw bar, being tightened with the nuts at the end. The same kind of clevises can be reversed on the draw bar with the use of short chains to attach to the double trees; they can then be adjusted to meet other implements and the same draw bar used.

The holes in the harrow bars carrying the teeth should be bored small enough to admit of the teeth being burned nearly to the desired

distance, then by tapping they can be made to fit tight. As the teeth wear they can be driven down. During the first season the bolts should have attention and kept tightened. With a good coat of paint each year this implement should last almost a life time.

The writer is sure this harrow will do 100 per cent more efficient work and at much less cost than the ordinary harrow used on the dry-farm in the state.

Have named this the "NEPHI HARROW" because it was designed and developed on the Nephi dry-farms to meet the need of an economic system of farming.

Will give description of the home-made weeder in a later issue of the Utah Farmer.

## Factors In Successful Farming

A talk given by David A. Smith at Logan Round-Up.

Those of you who have listened to the remarks of the previous speakers during this roundup, and especially those of Dr. Evans and Mr. Brossard, perhaps feel that there is not much encouragement for one who desires to take up an occupation of farming.

These conditions, which have been called to our attention may seem to some to be the extreme, but they are actual facts based upon actual conditions as they are found in this state. Those of you who have had the privilege of traveling through the east already know that the conditions of the farms, generally speaking, in the state of Utah, are far below the average. As stated yesterday by Dr. Evans, as a rule we are failing to build upon the most excellent foundations laid by the early pioneers, and many have a tendency to tear down.

I feel with him that it is about time we were bringing about that reconstruction period which will put the farms of Utah where they belong. When we can realize that according to eastern reports, one acre of farm land in the state of Utah is worth two acres of land in the east, we get a small idea of what our opportunities are.

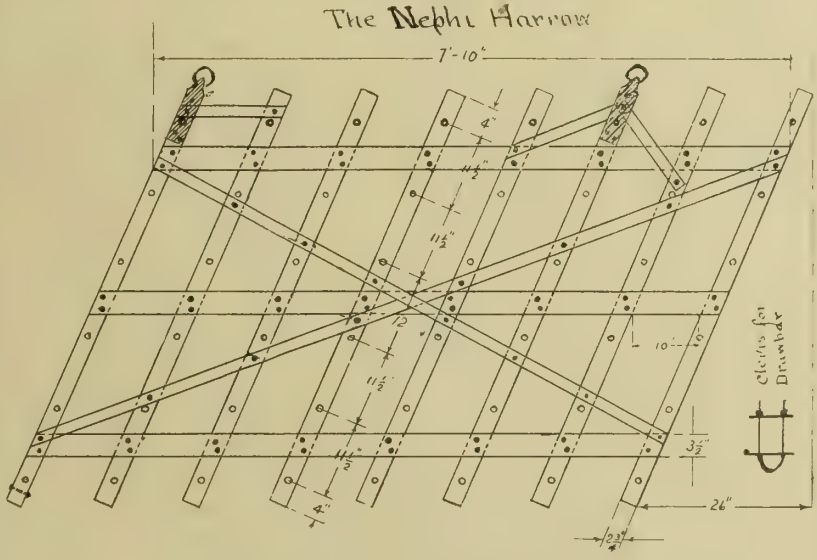
In the first place, we seem to have abandoned the plans laid down by the early settlers of this state, and which mean so much for their success, that of co-operation and centralization, leaving the individual of today to work out his problems in his own way. What are the results of this condition?

In the early days business was carried on by trading one commodity for another, as money was very scarce. Today many of us are using the same methods and what are the results. Competition one with another, lack of interest in farm life and in many places failures where prosperity should prevail.

Now to my mind the first factor in successful farming is to thoroughly educate those who are following this occupation, to the necessity of organization and co-operation. And to better explain what I mean let me illustrate. In the mercantile business, the banking business, etc., the forces are thoroughly organized. Each individual concerned being placed where he can be of the most service to the company he is serving. If you go to the banker and ask for a loan he does not tell you that he does not know whether he can make a loan or not. He immediately asks you what your securities are and then if there are very great risks perhaps states that he will submit the matter to a committee which is appointed by the stockholders of the bank and whose duty it is to help him decide on matters pertaining to the interest of the bank, letting you know that afternoon or the following day. Why is this done? Not because this banker is not competent to give you the word offhand, but because if left to himself there is a greater chance of his making a mistake, but with the advice of his associates this danger is minimized. And so with other institutions. Business is not a game of chance but every detail of a successful business is studied and carefully worked out.

Now what is the difference between the farm, the farmer and the mercantile institution? The only difference I can see is the mercantile institution has a manager whose duty it is to

(Continued on page 6)



Materials and Approximate Cost.

8 pieces harwood 3 in. x 3 in. x 5 in. 6 in., dressed to about 2¾ in.	
3 pieces harwood 1 in. x 4 in. x 8 in., dressed to about 7-8 in. x 3½ in.	\$7.50
1 piece strap iron ¼ in. x 1½ in. x 8 in. with ⅝ in. holes drilled	\$1.00
1 piece strap iron ¼ in. x 1½ in. x 7½ in. with ⅝ in. holes drilled	\$1.00
3 pieces strap iron ¼ in. x 1½ in. for braces in front holes drilled	\$.75
2 combination plate and clevis with ring (made of ¼ in. x 2¾ in. iron and clevis turned under to catch first bolt	\$1.00
16 bolts 5-16 x 3¼ in., for ends of 3½ in. x 3½ in. pieces	\$.30
43 bolts 5-16 x 4¼ in., for wood braces	\$.90
18 bolts 5-16 x 3½ in., for iron braces and clevises	\$.35
9 bolts 5-16 x 4 in., for iron braces	\$.20
48 harrow teeth ⅝ in. x 12 in.	\$5.00
<b>Total</b>	<b>\$18.00</b>

The above prices are regular for new material and with the wood dressed and the irons made and holes drilled by the blacksmith. Where the farmer can use old wagon tires and scrap iron for braces doing the smith work himself, and can work the timber himself, the cost can be materially reduced. Above is the specifications and cost of one section only; double each item and cost for a complete two-section harrow.



## Questions and Answers

Boulder, Utah.  
Utah Farmer:

Dear Sirs:—Will you please tell me through your next issue all you can about the growth of Sudan Grass. That is, what kind of soil does it do the best on? How much water does it need when there is a good supply the year around? How can I tell when it is ready to cut the first time? We have plenty of water here but would like to know about how much water is necessary and when it is necessary?

All the information you can give me on the growth of this grass will be appreciated.

yours truly,

Francis Lyman.

Answered by F. S. Harris.

Sudan Grass is an annual plant belonging to the Sorghum family. It was improved from the Egyptian Sudan in 1909, and has since that time spread very rapidly over this country. It seems to be fairly well adapted to dry climates where it is one of the most promising of the forage crops. It is not so particular as some crops about the kind of soil, but it does best in a fairly rich clay loam. Belonging to the Sorghum family, it shares with the rest of these crops to preference of a warm growing season, and it is injured by any long-continued cool weather. It has rather a short growing season, maturing hay in from 75 to 80 days and seed in from 100 to 110 days from seeding time if the weather is warm.

Sudan Grass should not be planted until the soil has become warm in the spring. Sowing in cold soil only delays germination and dwarfs the early growth. It can be sown any time during the summer as a catch crop so long as 70 or 80 days intervene before the first expected frost. It can be sown in rows 18 to 42 inches apart and cultivated, or it can be drilled with a grain drill or broadcasted by hand. In dry sections, it is usually more profitable to seed it in rows and cultivate. The rows should be as close together as the tools of cultivation will permit.

Rows 36 to 42 inches apart require two or three pounds of good seed to the acre. Rows 18 to 14 inches apart require four to six pounds and when drilled or broadcasted, 16 to 24

pounds to the acre are required. Sudan Grass is easy to cut with the mower and cures readily. When it is harvested for seed ordinary grain binder is best suited for handling it. The best time to cut for hay is just after full bloom so it will have as much time as possible for a second growth. After cutting, it renews its growth promptly when moisture conditions are favorable, and in 40 or 50 days another cutting is ready. Where irrigation water is available it can be applied two or three times during the season at periods when the soil becomes dry.

Utah Farmer:

Is there any reason why potatoes should not do well on land that has grown beets for five or six years in succession, if the land has had a coat of barnyard manure each year and another coat before the potatoes are planted? I am enclosing envelope for answer.

E. H. Melling.

Answered by Dr. F. S. Harris.

There is no good reason why potatoes should not be planted on sugar beet land if sufficient farm manure is applied. Both potatoes and sugar beets are heavy feeders on the potash of the soil but the manure should make up for this. The deep tillage necessary for beets puts the land in good condition for potatoes.

Annabella, Utah.

Utah Farmer:

I am writing to you at this time, to see if you can tell me why my cream will not churn into butter. I get it the right temperature or 66 degrees, I let it ripen. Keep my cream 3 days, I have nice thick cream and when I start to churn it goes foamy and stays in that condition.

Yours respectfully,

Mrs. V. Fairbanks.

Answered by Dr. W. E. Carroll.

Difficulty in churning is usually due to one of the following conditions: too low temperature, too much cream in the churn, cream too sweet or too thin, abnormal fermentation in the cream, advanced period of lactation of the cows, or dry feed. Your cream should churn at 66 degrees, but if it does not, try raising the temperature 2 or 3 degrees and ripening it to a higher degree of acid. If the cows are well advanced in lactation period this may be the cause, especially if you are churning from only one or two cows. The only remedy for this is to have cream from more and fresher cows. If the dry feed is the cause, roots should be fed, such as carrots, beets, or potatoes, which should improve the cream.

Ogden, Utah.

Utah Farmer:

What is the value of tankage and silage for dairy feed?

E. J.

Answered by W. E. Carroll.

Tankage is seldom, if ever, fed to dairy cows. It is a feed very rich in protein, but its offensive odor limits its usefulness to certain classes of animals. It has been fed to best advantage to hogs, though in a few cases it has been fed successfully to

It will be of advantage to you to identify yourself with a large, steadily growing bank like this.

Business may be transacted by mail.

**Walker Brothers  
Bankers**

SALT LAKE CITY

Founded 1859. "A Tower of Strength."



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Another large consignment of Pure Bred Red River Grown OHIOS, IRISH Cobblers, Green Mountain and Rurals will reach us next week.

This stock was selected after critical comparisons with samples from all the leading Potato Districts of America.

While the cost is a trifle more, you and all the rest of the up-to-date growers know the BEST is the cheapest.

Let us help you control the Potato Disease Problem. Full information cheerfully given.

WRITE US TODAY

If you haven't our Seed Book ask for free copy.

**PORTER-WALTON CO.**

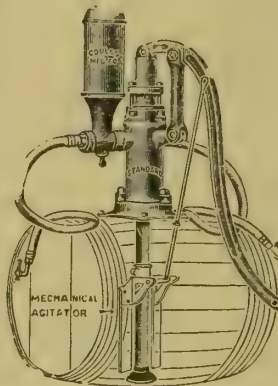
Seed and Nursery Specialists

SALT LAKE

## SPRAYING TIME

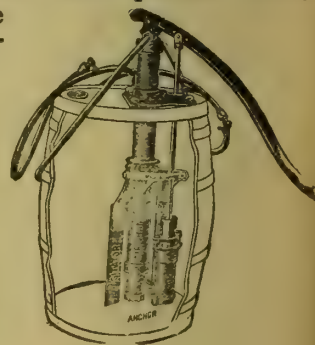
### Will Soon Be Here

—and no matter how small or how large your orchard you should give each and every tree careful attention. Spraying is one of the most important features in the proper care of the orchard, and our stock affords complete selection of sprayers from the smallest hand operated bucket machine to the big power sprayers.



We carry the famous Gould line, known throughout the country as the highest standard of quality and efficiency.

We also carry a complete line of spraying materials, including lime of sulphur and arsenic of lead in powder and paste form.



## The Salt Lake Hardware Co.

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SALT LAKE CITY, UTAH.

sheep, and even horses have been persuaded to eat it. There is no experimental record of its value as a dairy feed.

It may be possible that the cows could be persuaded to eat it, though the milk should be watched carefully to see if the odor taints it.

Its chief value is in the protein it supplies it being used with corn and other feeds of low protein content. It is less needed where alfalfa hay is available than where grass hays are fed.

Corn silage is one of the best win-

**EAR PERFECT  
TAGS**



Samples Free  
**ATTACHED INSTANTANEOUSLY**  
Name and Address. Numbered if Desired.  
LEG BANDS for Poultry, Pigeons, Turkeys  
SALT LAKE STAMP CO. Salt Lake, Utah.

ter dairy feeds that the corn belt farmer has. Silage feeding is also being worked out in Utah with considerable success. It adds a succulent to the ration to which the cow responds very readily.



ECHOES FROM CEDAR CITY ROUND-UP.

Practically every town in Southern Utah has been represented at the Cedar City Round-up which has held its sessions in the excellent rooms and well equipped laboratories of the Branch Agricultural College. The first weeks enrollment was 456 and Wednesday night of the second week it totaled 560.

Hon. Mathoniah Thomas in a lecture on water emphasized the importance of an organization in the operation of irrigation water. All the interests on every stream should organize and be directed from one representative board. Keep your water troubles out of the courts. Employ every other means of settlement before resorting them. Appoint committees from each interest. Let them get together and thresh the differences out on a friendly basis. It saves a past amount of money, time, and trouble.

Mrs. Nellie K. Jones in her talk to the women on children advised that the delicate child be given plenty of fresh air, fresh milk, sensible clothing, and individual care. No general rule can be applied to all children. Each child represents a problem which should be intelligently studied and its specific needs determined and provided for. This is the specialized study of the mother and should receive her best and most conscientious thought and effort.

State Horticulturist J. Edward Taylor lectured on the necessity of the home garden. In planting it a systematic arrangement should be followed. Determine the best things to plant, then set out to get a maximum yield from a limited area. It is usually best to plant rhubarb, asparagus, gooseberries or some other small fruit in the outside rows and arrange your other garden crops systematically on the rest of your small garden plot.

The women of Cedar City have formulated a set of resolutions, which will be presented to the city council, promoting the movement for pure milk. They ask that an inspector of barns and corrals be appointed who shall see that they be kept clean and sanitary. They recommend the use of the regulation milk pail; that the cow be curried and her udder and flanks, as well as the hands of the milker, be thoroughly washed before milking; that all vessels used for milk be carefully sterilized; that the house and milk cellars be well screened and that fly traps and other methods of fly extermination be extensively used.

Miss Gertrude McCheyne of the Utah Extension Division urged the women to get busy and make use of the opportunities offered for home demonstrators under the provisions of the Smith-Lever law. These demonstrators will not be provided unless the women want them. Their special work is to visit the women in their homes; help them to make lighter their work and help in every way possible in solving womens' problems. These home demonstrators are women who are especially fitted to aid other women in their home life.

If you are planning to set out an orchard this spring send to the Agricultural College at Logan for bulletin 141 which will tell you how to select a location which the frost will not reach

It is written by Prof Batchelor and

Prof. Frank West who have conducted many experiments with regard to temperatures at different elevations.

WINTER FARM WORK

M. A. R. Kelley, Missouri, College of Agriculture.

Haul manure.  
Test seed corn.  
Prepare for all spring work.  
Lots of necessary things can be done now which will save time later on.  
Have you cured plenty of pork and beef for the summer? If not, do it now.  
This is a very good time to look over the repair all macainery, harness, and fences.  
A good supply of bolts, screws, and nuts will save a great many hours of hard labor later on in the season.  
Every day now means a little advance in the price of seed. If any seed is needed. now is the time to purchase it.  
Watch your wood pile! Replenish it if necessary so that it will be large enough to last until this time next year.  
Hired labor can profitably be put to work cutting brush and removing rocks from the fields. Both should be used in making dams to help prevent soil washing.  
The store keepers have all taken invoices of their stock. Take a hint from this and do the same, find the leaks, stop them as soon as possible, and increase your farm profits.  
Good tools pay! With good tools and a little repair shop on the farm you can do all the repairing that you will have to do and keep your implements in good shape at all times.  
A small hand forge is often very handy on the farm. In many cases it will pay for itself the first year. Once the method of using it is learned, the trips to the blacksmith will be less frequent during the very busy summer season.  
Harrows, disks, and cultivators should all be looked over carefully. Dull harrows are very inefficient tools to use. The blades of the disk should be sharpened and the bearings should not be neglected. Renew them when necessary. Dull shovels on cultivators cannot be expected to do efficient work.

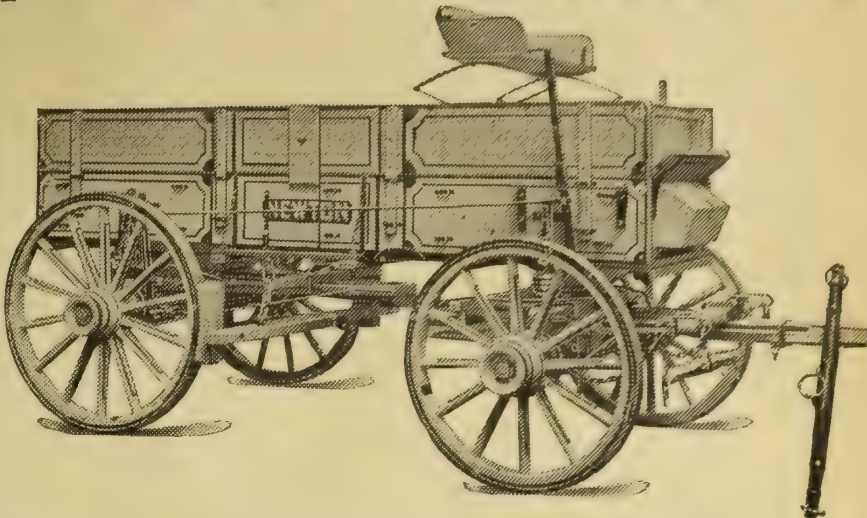
The farmer is himself a manufacturer, but when the manner of selling his products is observed the conclusion is formed that his marketing methods are not worthy of the name. as they consist chiefly of "dumping" rather than of marketing.

Take a day off to cut the weeds, not only those around the yard but along the highway adjoining. It is the eternal question—"Am I my brother's keeper," that makes so much inconvenience and trouble for us all.

The soil is a very important factor in gardening. Sandy soils are adapted to early vegetables; the loam soils to tomatoes and muskme.ons, and the musk soils to the nitrogen feeders. lettuce, cabbage, celery and onions.

Look out for rabbit work on the young fruit trees. Either get the rabbit or protect the trees.

THE NEWTON MOUNTAIN WAGON



The Newton Mountain Wagon has three leaf spring seat, bow staples, tool box, tire burrs in wheels, clipped roller clear brake, heavy flat truss under axle and hounds on top of reach.

Newton Wagons have been standard since 1854 and are built in many styles for all localities. Write us for further information.

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Murray, Utah                      Idaho Falls, Idaho

PERFECTION FURROWER



Mr. Farmer, Anywhere:  
Make your FARM work easier and more effective by using the best FURROWER obtainable.

The PERFECTION is the best. It gives you efficient service, durability and economy in operation.

I want your business, and you want, or should have, the machine so order one TODAY "LEST YOU FORGET."

Send for booklet, or still better, send order. The price is right and you will get a SQUARE DEAL.

**J. P. MADSEN, Sales Agent,**  
Richfield                      Utah



## FACTORS IN SUCCESS.

## FUL FARMING

(Continued from page 3)

become familiar with every phase of the business. While on the farm this detail does not seem to be necessary.

Let us view the possibilities of the farm as a business, and here let me say that the suggestions I intend making are not theories, but are conditions which have actually been worked out. For example. Under the present system of farming, the farmer of the state of Utah is growing crops which are the easiest to grow and market, I believe we can class Utah farmers into three groups. First, is composed of those who are farming in the past; 2nd, those who are farming in the present, and those who are farming for the future. The first class are content to farm using the methods of their forefathers. The second class are satisfied if they are getting a living, and the third class not only want a living, but something to lay aside for the future.

The average Utah farmer raises a few tons of hay, a little grain, and perhaps some sugar beets. He may have a few cows to supply his family with milk. And produce a few calves that he can sell or raise for beef. He may raise a few pigs which supply his family with meat, and perhaps one or two for the market. His chickens keep the family in eggs in the summer time and help to furnish meat in the winter. And when winter supplies and provisions are needed from the store he generally kills a pig and tries to dispose of it. He sells his hay and his grain, most of this going to the local market. His neighbor is doing the same and at about the same time. The result is the local market is overloaded, prices are reduced, the full value cannot be had for his product which makes him discouraged and he immediately says there is no money in chickens or hogs, etc.

Now where is our organization. If each community was thoroughly organized would this same condition exist? By joining together, a carload of hogs could be shipped to some market where the demand would bring a high price. Our poultry could be shipped in sufficient lots to warrant shipment. And our milk could be handled to the best advantage. And through organization could not these conditions be improved? For example. At present when we sell our load of hay, our grain, etc., we are selling just that much of our farm. And how long will it be before we have sold all our farm, or in other words before it becomes worthless as are many of the farms in the east today.

With the alfalfa, the cereals the sugar beets and the ensilage corn we have a combination of crops which as rotating crops are the equal of any known for the preserving of the fertility of the soil. These crops we are also told, contain the very best balanced ration known for the dairy cow and for the producing of milk. If this is true why not market these crops through the dairy cow, retaining the fertilizer and returning it to the soil to increase the value of our farm and the amount of our produce. And when I say market through the dairy cow, I don't mean just cows as most of us are now doing.

How many of us know what it costs to produce our farm products? How

many who are now keeping cows know whether or not they are returning full value for their feed? If we are conducting our farms as a business we will know this condition, and in this connection let me say that it is not always the cow giving the biggest flow of milk that is the most profitable.

I had the privilege of staying with a farmer some time ago who was keeping six cows. I asked where he was selling his milk. He stated that he was selling none as it took all they had to supply his family with milk and butter. I asked why he did not keep one good cow rather than to feed six. He stated that it would be too much trouble; that they had to be given too much attention, while the cows that he had could be turned on the range when they become dry and a fresh one brought in.

Now let me quote from one of the eastern journals. "In traveling over the country it seems to be true that wherever there is a farm that shows evidence of not being in a prosperous condition, either no stock is kept at all or so-called dual purpose cattle are kept. Wherever one finds a dairy community where special purpose dairy cows are kept one finds a prosperous community with fertile fields and modern buildings."

Some of you may say that it is impossible to raise sufficient funds to buy blooded dairy cattle, you are therefore compelled to take what you can get. I maintain that if you are thoroughly organized and overcome the trait of jealousy and selfishness that this condition is an easy one to overcome. It is not necessary for every farmer to keep a bull on his place, but a number could join together, each putting in a certain proportion of the cost of purchasing one of the very best breeding that could be had, one whose ancestors had proven their value as dairy stock and upon which you might rely for the betterment of your stock. Having done this it will be necessary for you to keep a careful record of the conditions of your cattle. The amount of feed consumed, and the amount of milk and butter fat produced. Otherwise you will not be able to know whether you are progressing or going backward.

Do you value your time as an asset on the farm? The banker or merchant counts every minute as being worth so much cash. Then if you are to be successful in your business, that of farming, you must value every minute as so much cash. If you are doing this you cannot rely upon your memory as to the conditions of the present or past, but you will make a careful record of every condition of the farm. With this done how many years would it take to build up a high class, high producing dairy herd. Then again the question is asked, this proposition is not feasible for to properly take care of the high class dairy cow it is necessary to have warm stables in which to keep them? And in reply to this let me say, don't you think that with ten cows producing more milk than was formerly produced with 20 cows you should save enough in a short time build a suitable barn that you might properly take care of these high class dairy cows?

And here again we are brought face to face with the importance of sanitation, or in other words cleanliness,



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INTERNATIONAL EXPOSITION

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**Sent Free** Write for booklet on how to set posts and erect fence. Every farmer should have it.

**Dealers Everywhere**

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# SEED OATS

WILL BE SCARCE THIS SPRING

Anticipate your needs now while stocks are complete.

**We are headquarters for  
re-cleaned High Grade  
Seed Oats**

SEND FOR SAMPLES AND PRICES TODAY

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**RELIABLE SEEDSMEN** Est. 1865  
**SALT LAKE CITY, UTAH**

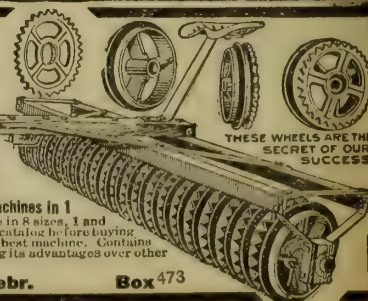
## WHEAT, ALFALFA

and other grains yield more where a perfect seed bed is prepared. The Western pulverizer, packs and mulches—makes a perfect seed bed at one operation. Saves seed, time and horse power. Is especially adapted for breaking crust on winter wheat or other grain or in orchards after irrigation or packing rains. It forms the hardest crust into a granular mulch without hurting the grain, and prevents evaporation.

**Western Pulverizer, Packer and Mulcher 3 Machines in 1**  
made in 8 sizes, 1 and 3 sections, prices \$20 and up. We want every farmer to have our free catalog before buying a roller or packer. It proves we can save you money and have far the best machine. Contains full description, price direct to you, letters from many farmers proving its advantages over other makes, and much other valuable information. Send for it today.

**WESTERN LAND ROLLER CO., Hastings, Nebr.**

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Who Displays This Sign



**1 1/2 H.P. \$35**  
**On Skids With**  
**BUILT-IN**  
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**3 H.P. - \$ 60.**  
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**ALL F.O.B. FACTORY**

A Fairbanks-Morse quality engine at a popular price. The greatest engine value offered.

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Go to the dealer who displays the sign shown above. See the features that make it the one best engine "buy" for you. When you buy an engine from your dealer you deal with a local representative of the manufacturers. He stands behind the engine he sells. He's responsible to you. He's at your service to see that you are satisfied.

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**See the "Z"**  
**And**  
**You'll**  
**Buy it.**



**RAISING POTATOES.**

The potato crop is an expensive one, requiring valuable seed usually high priced land and quite an amount of labor to bring to the harvesting period. It is therefore very necessary that it should be started right by getting in the seed at the proper time, delivering the seed of the size desired into the ground without injury to the "eyes," spacing it at equal distances and covering it and rolling the soil over the seed in such a manner as to secure the most satisfactory results. Write to the general agents, Miller-Cahoon Company, Murray, Utah, and Idaho Falls, Idaho. adv.

for we find to get the best results from our cows they must be kept clean. This causes us to care for our straw, to carefully bed our animals. The manure is immediately taken to the field to enable us to keep our cows in the best possible condition, and here we unconsciously or consciously return to the soil our straw and hay and grain when it is in the best condition to render us greater service.

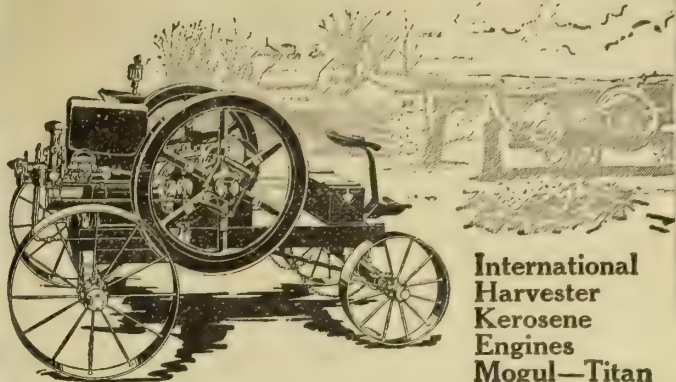
Then too, why not raise a few hogs on the milk which is left after selling our cream. Not just pigs as we find today but high class hogs, besides they are no better than any other pig unless you give them special attention. Again I say is your time of any value to you? If it is, it is worth while to combine with your neighbor buying the best males that can be had and thus in a few years your community will become known for the class of hogs it produces. You will create a demand and interest and instead of taking your pig to the local market when it is ready to sell you can join with your neighbors shipping in bulk, enabling you to get the best market and the best price. You will soon learn that you can raise pigs on pasture and that it is not necessary to lock them up in a little corner of your barnyard where they must wallow in their filth, which knowledge will improve our sanitation.

Then again, why not make our poultry work for us. It costs no more to keep high grade poultry than it does to just keep chickens. This problem can be worked out as the others. What would it cost if you combined to purchase one or two pens of the most suitable strain of chickens for your locality, distributing the eggs through the organization giving just a little attention to the raising of chickens. They don't require much attention. While we are engaged most with our farm work. But when our crops are all up, would it not be profitable to have a good warm coop where we can keep our poultry clean? Try alfalfa leaves, etc. Why not have them do their heaviest laying in the winter time when eggs are 40 and 50 cents a dozen instead of when you can only get 15 cents. Because some say it is too much work and they don't like the detail. If these are your feelings you do not consider your time as being of any value to you.

How many consider the value of their machinery? Is this a part of the business we are attempting to run? Is it of any value to us? If so, it will be carefully protected from the weather immediately after its season's work is done. The working parts will be freed from the hard oil and gum which has accumulated during the year. If any repairs are necessary they will be made during the winter months when we have the most time, instead of leaving them out in the snow and rain as is the case on the average Utah farm today, and when spring comes instead of being compelled to delay our work because of some repairs that must be made to the machinery, due to conditions that could have been remedied earlier, besides prolonging its usefulness.

Have we studied the art of plowing, cultivation, irrigation and drainage? These are all very important parts of the business of farming. And without a thoroughly practical knowledge

**Welcome News on Engines**



**International  
Harvester  
Kerosene  
Engines  
Mogul—Titan**



**I**nternational Harvester Mogul and Titan engines work successfully on kerosene, running on light or full loads. They use the least expensive of oil fuels. You are not limited to one kind of fuel, as with a gasoline engine, but can use any kind that is most convenient or least expensive. That is a very real advantage.

You know something about IHC engines. You have heard of their thorough reliability, the good material and workmanship that goes into them, the ease with which owners get repairs and service when needed, the years they last—and the other points that have sold a quarter million IHC engines.

But do you appreciate what real kerosene-burning means—what it saves you in money—how it assures you an unlimited supply of cheap fuel? You need Mogul or Titan kerosene-burning engine power to be sure of always having power at a price you can afford.

Ask the IHC dealer to show you a Mogul or Titan engine—sizes from 1 to 50-H. P. If you prefer to write us, we will tell you where you can see our engines and send you catalogues at the same time. Drop a card to the address below.

**International Harvester Company of America**

(INCORPORATED)

**218 So. 6th West St., Salt Lake City Utah**



**Just Drive—Let The Aspinwall  
Do All Your Potato Planting**

ONE man and the Aspinwall plant 5 to 8 acres of potatoes a day—and plant them right. Machine opens furrow, drops seed—any size—any distance, covers, marks next row, and if desired, sows fertilizer all in one operation. Corn, Pea, and Bean planting attachment furnished when wanted.

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520 Sabin Street Jackson, Michigan  
Cutters, Planters, Sprayers, Diggers, Sorters.



of his part of the farm work how can we obtain the best results?

And now as I stated before, these conditions are not theories but actual conditions that exist and that can be remedied if we have a desire to remedy them. Let me again call your attention to the quotation made by Mr. Stevens. Let us rub our brains together that they might perhaps strike an intellectual fire that will give us some light."

Now with the best farms and surest crops and a ready cash market for all our produce, why permit people to say that it is a shame to see the conditions of the farms in the state of Utah. That ten cows could profitably be kept where one is now being raised. Why permit people to criticize the unsanitary, filthy conditions of our farms, the lack of interest in

our barns and surroundings. Let us look upon our farms as a business and conduct our affairs as does the banker or mercantile institution, etc. If this is done, I feel safe in saying that it will not be many years before it cannot be truly said of the farmers of the state of Utah that they do not know what paint is for.

Yes, I hear someone say that is all good theory but it cannot be worked out, and let me say in answer to that, until we get such thoughts out of our heads our cause is hopeless, and anyone who attempts to improve our condition is wasting time. Do we care to improve our condition? Do we owe our community anything? Are we interested in our neighbor, or we selfish, narrow-minded individuals? If not, get busy and start something and do it now.



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TRADE MARK



You see it on every paper.

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SOME PEOPLE THINK

that

ANY OLD PAPER

is

GOOD ENOUGH FOR A FARMER

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RECOGNIZES

LOCAL CONDITIONS

and give our readers something  
that will be of actual service to  
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sure it is in the garment  
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One trial will convince you.

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weight 6 pounds

Agents, A. B. Dick Mimeographs  
Addressing machines and all  
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Performs a Service

There is a great movement in the commercial  
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Goods so labeled must be maintained at a  
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value—or the public will discriminate against them.

The public cannot discriminate against any  
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merchandise, therefore, some interests oppose this  
movement for the fixing of a commercial re-  
sponsibility.

Do you know that a trade mark is worth money?



We are the  
people who  
make

VITRIFIED  
CLAY  
DRAIN  
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for farm  
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Approved Garments



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CRAGER WIRE and Iron WORKS,

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ASK YOUR GROCER  
FOR  
FOREST DALE  
SARATOGA CHIPS  
AND  
GILT EDGE BRAND  
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**SEGO**  
MILK

—Cream's only rival.

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to Buyer and Seller

to its owners and also to you, because by the trade mark you are enabled to distinguish a meritorious product from the poor and mediocre ones. "IT THUS PERFORMS A SERVICE BOTH TO BUYER AND TO SELLER."

It makes no difference what you are buying, it is worth while to study the names and trade marks back of your purchases as those firms are engaged in building a lasting business on the basis of square dealing, quality, character, and integrity.

Names on this page deserve your consideration and approval for they are those of firms who "Sign" their products—stand back of them—and make character, integrity, and quality their slogan.

INSIST ON  
AGNEW'S  
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CHEESE  
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"It Spreads"



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OLDEST KNITTED GARMENT  
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SALT LAKE WIRE & IRON WORKS  
Everything in Ornamental Iron and  
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Wrought Iron Coal Shutes a Specialty  
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Hams, Bacon and Lard,  
There is nothing better.

Ask your Grocer and Meat  
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If you have live stock to  
sell communicate with us

UTAH PACKING  
and  
PROVISION CO.

### What Are Your Printing Needs

Every farmer should pay more attention to his needs in printing. Those not acquainted with him judge him by the printed matter he sends out. Neatly printed Letterheads, Envelopes, Butter Wrappers, Advertising Circulars, etc., add greatly to his influence and prestige.

What Are Your Needs?  
We are equipped and prepared to furnish you with anything in that line at the lowest possible cost.  
Send us your next job, or get our estimates.

LEHI SUN  
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Lehi Utah

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MEET YOUR FRIENDS  
AT

**Hart's Lunch**

The Sign of a Good Place to Eat

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We Develop Any Size Roll 10¢  
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Ask for quotations.





## THE HOME

### THE NERVOUS SYSTEM AND ITS CARE.

Notes from Talk Given by Dr. M. J. McFarland at Logan Round-Up.

Conservation of nervous system must begin in Childhood.

Sleep. From birth to six months the baby should sleep undisturbed, except at regular feeding times, most of the 24 hours. From eighteen months to two years, twelve hours at night and four in the day. Divide the day time period into two parts. From two till five years, a nap in the afternoon immediately after dinner so as not to interfere with the early bedtime which should be not later than seven o'clock. Playing with young children just before putting to bed is a sure way to prevent them from going to sleep. The child should be happy and kept interestedly busy, and natural fatigue will induce sleep. Plenty of fresh air, sufficient but not too much covering and absolute quiet are necessities. Taking babies and young children out to theaters and dances is injurious. The close, hot rooms, lights, noise and necessary disturbance when taken home all affect the delicate nervous system.

Playing on the emotions of a child. Frightening a child with stories or sudden sounds; tossing a child in the air and catching him is a distinct shock; tickling a child; teasing until the tears come, are all means of causing more or less severe nervous derangements.

Self consciousness or causing a child to think constantly of himself is brought about by calling undue attention to his actions, making him show

off before people, while bashfulness, another form, may be overcome by teaching a child to have confidence in people and in avoiding making fun of him or what he says or does, in other words treating him with the respect due to an individual.

In case of sickness avoid talking before the child of his ailments and magnifying them. Too much sympathy and too great importance attached to small childish troubles and illnesses brings self concentration, and the health may be seriously impaired.

Finally, begin to train early in habits of happy industry in home and out of doors. Do not exhaust a child but put interests that are alive into his daily life. Teach habits of self control and self respect.

#### Adults.

When adult age is reached the nervous system is harder to control. It is necessary to watch that a small indifferent habit does not become fixed. Self discipline in checking oneself daily is needed. Older people tend to fixity in grooves of thought. It is a good practice to make oneself change to other lines of thinking. The difference between old age and youth is the power to break a habit whether of thought or action.

Worry is the great nerve wearer and is the result of lack of nerve control. Intense mental activity just before retiring causes loss of sleep owing to the increased blood pressure in the upper part of the body. Monotony in work affects the nerves. A test of education is the power of a woman to find interest in her surroundings even though in a different sphere than that to which she is accustomed. The infinite beauties of farm life and the possibility of helping her community will appeal to the town woman of good education. Books, music, and magazines are open to every home. Vacations, variety in work, company and keeping the Sabbath Day are all means of insuring a stable equilibrium without which a life cannot be well lived.

Sleep. Adults need eight to twelve hours sleep, retiring preferably early. Women, especially mothers, should take a rest in the day. Learn to relax, to let go of cares and thoughts of work. The digestive tract has much to do with unstable nerves. Constipation is productive of many ills. Epilepsy has been found to be a germ disease and is always worse in cases suffering from constipation.

Subconscious Affections. — Eye strain, tired or sore feet, digestive disorders, bad teeth, may all affect the nervous system subconsciously, producing irritability and nervous disorders.

#### BUTTONHOLES THAT LAST

Addie D. Root.

"If well made, a buttonhole should wear as long as the garment. There is no excuse for the buttonhole that soon breaks through at the end and leaves a slit twice as great as the diameter of the button."

To make a good buttonhole, begin

### There's the Red Ball—no Doubt About the Quality

Eight and one-half million men wear "Ball-Band" Rubber Footwear and over 50,000 stores sell it.

"Ball-Band" boots are vacuum cured. During the vulcanizing this process causes a tremendous pressure on the fabric and rubber and makes the boot one solid piece. Look for the Red Ball.



## "BALL-BAND"

If you figure the cost of your "Ball-Band" Rubber Footwear by the cost per days wear, you will see that it is the lowest-priced rubber footwear you can buy. We want to help you get all the service out of "Ball-Band" that we can build into it.

#### "More Days Wear"

our Free Illustrated Booklet, tells how to make your rubber footwear wear longer. Write for it.

If you can't locate a store that sells "Ball-Band," write us and tell us the name of your local merchant; we will see that you are

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#### Something New

"Ball-Band" Light Weight Rubbers for street wear in Men's, Women's and Children's sizes. They are "Ball-Band" Quality and Value. Look for the Red Ball on the sole.

MISHAWAKA WOOLEN MFG. CO., 370 Water Street, Mishawaka Ind.

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## If You Want Comfort

Along with the best workmanship and lasting qualities, in your work shirts, you should wear

### SCOWCROFT'S "MADERITE"

It is the strongest and most comfortable work shirt made.

You buy SATISFACTION when you buy

### SCOWCROFT'S "MADERITE"

Work Shirts

Ask the man who wears them.

JNO. SCOWCROFT and  
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Ogden, Utah.

The Utah Work Clothes  
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### Excursion Tickets On Sale Daily Limit Six Months

Ask your Agent  
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THREE TRAINS DAILY



PANAMA CALIFORNIA INTERNATIONAL  
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## Stays a Perfect Baker and Saves 1/3 Your Fuel



Most any range bakes well for a while, but to stay a perfect baker, year after year, this is what you want. To stay a perfect baker it can't have its joints stuffed with stove putty to crumble out and let in false drafts.

### Arcadian Malleable Charcoal Iron Range

This range is riveted metal to metal, air-tight without the use of stove putty, and stays airtight year after year. This is why it stays a perfect baker and saves 1-3 your fuel bills, wood or coal.

Write for booklet that tells inside facts about ranges—learn how to judge range values—FREE. ARCADIAN MALLEABLE RANGE CO. Dept. 9 Milwaukee, Wis.

## Don't Shoot Your House Full of Holes

No use cutting a lot of holes and burdening your basement with a lot of cumbersome warm air pipes when the Caloric Pipeless Furnace heats all rooms with only one register—and 35% less fuel.

The installation is simple. It is just as easy to put the Caloric Furnace in an old house as in a new one.



Burns Coal, Coke or Wood.

It brings city comfort to the Farm Home. Lessens fire danger to house and children. Saves labor of carrying fuel and ashes up and downstairs. It is the one furnace that will not spoil the produce in your basement.

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Fairest offer ever made. If the Caloric Furnace is not entirely satisfactory we'll make it so any time within 1 year.

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If your dealer does not handle the Caloric write us for our illustrated descriptive catalog. Ser. Free.

The Monitor Stove & Range Co. 338 Gest St. Cincinnati, Ohio

the slit about a quarter of an inch in from the edge. Cut on a thread through both or all thicknesses of the cloth, making the slit the length of the diameter of the button to be used. Use a thread a little heavier than the cloth in which the buttonhole is worked and of sufficient length to complete it. The needle should be as fine as will carry the thread.

In working a buttonhole, first put in two or more stitches across the lower end of the slit to keep it from stretching. Then take two or more stitches down the side, across the end and up the other side, a sixteenth of an inch from the edge, bringing the needle out at the starting point. This will strengthen the buttonhole. In overcasting the edges, sink the stitch a thread beyond this stranding. Four five overcasting stitches on each side are sufficient to prevent raveling and to keep the strands in place. The last stitch in overcasting should bring the needle out at the end of the slit ready to begin working the buttonhole.

In taking the buttonhole stitch, the needle should be brought through towards the worker, deep enough to cover all stitches that have been made before and prevent pulling out. Before pulling through make the buttonhole purl by taking the point of the needle in the direction in which you are sewing. When the end is reached, take seven or nine spreading stitches, making a fan, if a rounded end is desired. Continue down the other side. If a bar is used, put the needle into the opposite purl at the end of the slit, draw the two sides together and make several long stitches the length of the width that the buttonhole is cut. Work the bar across the end, working from left to right with the blanket stitch. Finish by taking a few tiny stitches on the wrong side.

A lady and her little daughter were walking through a fashionable street when they came to a portion of the street strewn with straw, so as to deaden the noise of vehicles passing a certain house.

"What's that for, mother?" said the child, to which the mother replied, "The lady who lives in that house, my dear, has had a little baby girl sent to her."

The child thought for a moment; looked at the quantity of straw, and said, "Awfully well packed, wasn't she, mother?"

### THE STOMACH'S FUNCTION

The teacher was examining the class in physiology.

"Mary, you tell us," she asked, "what is the function of the stomach."

"The function of the stomach," the little girl answered, "is to hold up the petticoat."

Honey, alum and lemon juice is an old-fashioned but good remedy for croup.

"Waiter, is this veal?"

"Yes, sir."

"Well, I'll bet he gave his family lots of trouble. He certainly was a young tough." —Judge.

"Love may be blind, but marriage is a first-rate eye-opener." —Judge.

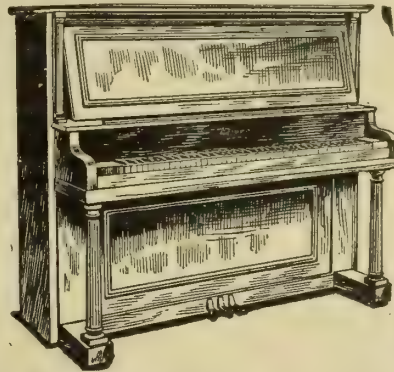


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25 CENTS the Pound, why pay more?

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Order from YOUR Grocer.



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## BUY A USED PIANO

We have a number of rebuilt and rented pianos and player-pianos which we are compelled to sell to make room for incoming stock. Some of these we have been forced to repossess, others are new pianos that have been returned from rent. Most of them have been in homes where they have had good care; several have been out less than a year! Some are half paid for already! We are going to give the benefit of what "the other fellow" has paid. Prices have been made that will move them all within a very short time.

Our list, with descriptions that would do these instruments justice, is too large to publish. If interested in saving one-half on a Piano or Player-Piano, fill out the enclosed coupon, and we will mail you a list with full description of these great bargains.

CONSOLIDATED MUSIC CO.,  
Salt Lake, Utah.  
Gentlemen:—Please mail me your list of rebuilt and rented  
Pianos Players  
I prefer.....case  
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Address .....

### Do This Now!

This is the opportunity you have been waiting for.

Fill Out and Mail Coupon to

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*Consolidated Music Co.*

ESTABLISHED 1862

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"54 YEARS IN BUSINESS."

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To get rid of rats get

## RID-OF-RATS



Non-Poisonous. Guaranteed to destroy the rat and mouse pest from corncribs, bins, poultry houses, stables, etc. No results, no pay. Box 10c; Doz. boxes \$1 east of Miss.; \$1.20 west of Miss. If your dealer can't supply you order direct. Write for catalog, it tells the story.

Berg & Beard Mfg. Co., 12 Steuben Street, Brooklyn, N. Y.

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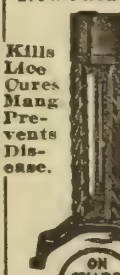
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TRY BEFORE YOU PAY  
KILLS 4 RATS FOR 1 CENT  
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Deseret Farmer and Rocky Mountain Farming.  
Established 1904

Entered as second-class matter in the postoffice at  
Lehi, Utah.

Published every Saturday by the  
DESERET FARMER PUBLISHING CO.  
LEHI, UTAH.

Subscription price \$1.00 year  
Canadian and Foreign postage 50 cents a year extra.

#### OFFICES

All mail should be addressed to the Utah Farmer  
Lehi, Utah, Kirkham Building.  
Our office at Salt Lake City, Utah,  
is at 712 McIntyre Building.



New York Office 5th Ave. Bldg.  
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Chicago Office Steger Bld.  
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former as well as their present address, otherwise the  
address cannot be changed. This is a matter of im-  
portance to you and to us.

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Utah Horticultural Society, Utah State Dairymen's  
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Bear River Valley Farmers' Protective and Commercial  
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Millers' and Grain Dealers' Association, Utah Fruit  
Growers Association.

#### OUR GUARANTEE

We guarantee every subscriber against loss thru dis-  
honesty or attempted swindle by any advertiser in  
this publication. We do not attempt, however, to  
adjust trifling differences between the subscribers and  
honest, responsible advertisers, nor will we pay the  
debts of honest bankrupts. Notice of complaint  
must be sent us within thirty days from date of the  
transaction, and the subscriber must have mentioned  
Utah Farmer when writing the advertiser.

Henry Wallace, Editor of the Wallace Farmer,  
died a few days ago at the ripe old age of eighty  
years. He has yielded a powerful influence for  
the upbuilding of agricultural industries, and the  
improvement of rural conditions. He visited  
Utah a few years ago and made a study of our  
social and rural conditions, and in a conversation  
with him not long ago he spoke in the highest  
terms of Utah and her people.

#### WE MUST FEED OURSELVES.

No country can become richer than its lands.  
From the soil comes our food and clothing; all  
other human needs are subordinate to these.  
Food is the chief material concern of life—its  
production the most important occupation. In  
the hard school of experience we are slowly  
learning the lesson of real business economy—the  
greatest lesson of all time—that of feeding our-  
selves. Let us learn that lesson well.—Charles  
M. Carroll.

#### BETTER HOME LIFE.

On the farm we should not give all of our time  
and attention to crops and the animals, or let  
them be our masters. We should spend a part  
of our time to build up our homes, train our  
children for efficiency, and do our duty as  
citizens of a community.

Generally we should take greater interest in  
public affairs, particularly with our schools, and  
know what influence they are having upon our  
children. We should show a greater interest in  
humanity and a higher regard for the church,  
schools and society, and those who bear the  
responsibility of the administration of our local  
and national government.

#### SELECT GOOD SEEDS.

The importance of being careful about buying  
vigorous seed for garden and field crops cannot  
be over estimated. If you will take just a little  
time and do a little thinking and figuring you  
will find that the losses that are sustained by  
farmers every year from planting poor seed is  
enormous.

The Iowa Experiment station examined 3,300  
samples of seed corn, an average of 19 per cent  
of the seed was entirely dead, 21 per cent was  
so weak that it was useless, and only 60 per cent  
of it was good.

These tests show how necessary it is that we  
plant only the best of seed.

#### FRUIT PEOPLE GETTING TOGETHER.

We believe that much good will result from the  
horticultural survey that is being made. A  
number of committee meetings have been held  
and plans are being perfected whereby all the  
varies interested in the fruit business will get  
together.

The nursery men, shippers, growers, canners,  
manufacturers interested in the fruit business, all  
have committees working, who will represent the  
different branches of this important industry.

The survey is being made under the direction  
of the State Horticultural Commission. A meet-  
ing will be held March 8th and 9th at the State  
Capital in the House of Representatives when  
further action will be taken. Success along this  
line of work as with nearly all others is in  
"getting together."

#### BETTER BABIES' WEEK.

It is a national affair, becoming very popular  
as it progresses, the movement for better babies.  
It has for its purpose a reduction of the mortality  
rate among babies, the rearing of better children.

Governor Wm. Spry has issued a proclamation  
setting aside the week of March 4th to March  
11th to be known in Utah as "Better Babies  
Week." The State Board of Health are issuing  
a bulletin for general distribution on "Baby  
Week" telling how to care for babies.

We urge our readers to unite in this movement  
and help awaken more interest and to study this  
important subject of devising ways and means  
to promote the welfare of the babies. In Utah  
the annual death rate of babies under one year  
of age, has been reduced from 1048 in 1908 to  
867 in 1914. Many of these deaths were prevent-  
able. Better conditions both sanitary, physical  
and moral will help the movement. Emphasize  
the work next week but continue the movement  
until we have better babies.

#### CLEAN THEM OUT.

We have for a number of years been very  
careful about the advertising that appeared in  
our paper. Have refused a great many advertise-  
ments because it was our policy not to carry  
such as liquor, patent medicine and other  
questionable advertisements. We want to en-  
dorse the action of the State Food and Dairy  
Commissioners and the State Board of Health  
Department in going after the dishonest adver-  
tisers. We say, "clean them out" and then keep  
them out. In so doing you are protecting the  
public.

We believe in clean, honest advertising and  
the Utah Farmer is the only paper we know of  
in the state of Utah that guarantees their read-  
ers against dishonest advertisers. We endorse

#### DR. WIDTSOE'S WEEKLY MESSAGE.

##### THE FARMER'S RESPONSIBILITY FOR GOVERNMENT.

A third of the people of Utah are occupied  
in farming. Nearly another third are engaged  
in serving more or less directly the farming  
communities. Utah is essentially a rural  
State. Under our system of government, the  
responsibility for governmental direction rests  
upon the majority. In Utah, therefore, the  
State must be governed, largely, by the  
people whose interests are close to the soil.  
To see that Utah is well governed is a chief  
duty of Utah's farmers.

It was not by chance, therefore, that Elwood  
Mead, good and great citizen, selected the  
Round-Up at Logan as the place in which to  
deliver his well-matured news relative to  
State Government. He spoke to the rulers of  
Utah—if they exercise their franchise wisely.  
Prof. Mead's theme was that a State should be  
managed as a business institution—not  
niggardly but wisely. Much might be said  
on such a subject in any American State; and  
we would no doubt all differ in our views as  
to the best method of simplifying and making  
more business-like the affairs of a State.

Meanwhile, changes are coming over our  
governmental vision. The political earth  
does move. It is the farmer's business to  
divest himself of little personal prejudices; to  
look at the great problem of State fairly, and  
to vote accordingly. A disquieting condition  
appears when in an election a small number  
of the total votes cast for individuals take the  
trouble to vote for or against weighty proposed  
amendments to the constitution, as has often  
been the case in Utah and other States.

If our method of government shall become  
better, the people must consider seriously the  
issues confronting them from election to  
election. To elect good men to labor under  
inefficient systems is to invite results of doubt-  
ful value. A man's work is seldom greater  
than the conditions under which he labors.

In a farming state, it is doubly important  
that the farmers give unprejudiced consid-  
erations to governmental issues. It is good to  
hear such an address as was presented by  
Prof. Mead, and it was a distinct compliment  
to the influence of the farming fraternity that  
he chose a gathering of farmers at which first  
to develop it. When the address is printed  
in the "Farmer," let us read and ponder it.  
But more important is a new determination  
to do our share in helping to improve the  
government of the State.

the movement "Truth in advertising" and be-  
lieve it is the only way that any firm or person  
can build a permanent business by being honest in  
all their dealings. Mistakes sometimes occur  
but any honest person is ready to adjust a mis-  
take and correct it when their attention is called  
to it.

There is a nation wide movement for "Truth  
in advertising." The federal government is  
helping. We believe that the Utah Farmer in  
working for clean advertising is only doing a  
duty it owes to its readers and the State.



## Get More Service From Your Harnesses



When removing harnesses or placing them on horses, be careful not to drag them through the mud and manure where they will come in contact with acids, ammonia and other destructive elements. Keep them safe from dust, dirt, dampness, etc., by closing the pores of the leather with—

### DUCK-BACK Harness Oil

An old harness when treated with Duck-Back Harness Oil regains much of its original elasticity and renders extra years of service.

There's no question, that once you see the excellent results received by the use of Duck-Back Harness Oil, you will use it always.

**Utah Oil Refining Co.**

Refiners  
Salt Lake City, Utah.

## TURKEYS AND CHICKENS

Two choice bronze gobblers \$5.00 and \$7.50 each.

White Leghorns, Plymouth Rocks, Rhode Island Reds, male and females. 1000 baby chicks—all kinds.

**Vogeler Seed Co.**  
Salt Lake City, Utah.

## Experts Endorse Beet Sugar

Not only have government experts and scientists declared that beet sugar, highly refined, is the same, chemically, as cane sugar, but the greatest cooks and bakers have also added their endorsement of Table and Preserving Sugar, made from western-grown beets.

**AMALGAMATED SUGAR CO.**

Attention Green Fruit Shippers.

A call for a meeting of all green fruit shippers has been made by Mm. M. Roylance, chairman, to meet at the Hall of Representatives, State Capital Building, at ten A. M. March 9th.

## KILL THE GROUND DOGS.

The common prairie dog or ground hog is one of the predatory animals that does much damage to the growing crops especially where the fields are large and sparsely cropped as in the case of the dry-farms in the outlying districts. As soon as the winter snow is gone and we have a few warm sunny days we see these pestiferous animals in large numbers in some of the dry-farm sections and unless they are kept under control by minimizing their numbers, they are sure to do much damage. Where large tracts are infested the fight against them should be by community, rather than by private effort. A good plan, that has been effective in some sections, is to set apart a day for such a campaign, and the whole community turn out including the higher grades of the public schools, and under proper organization and supervision, fight them in a systematic way.

There are two formulas of poison particularly good for the eradication of ground dogs and they are given here—First: dissolve 2 oz. powdered strichnia in half gallon of hot water, add about a teacupful table salt and some syrup or sugar to nullify the bitter taste; pour this over half bushel of wheat or oats, stirring well. Let soak for 12 to 24 hours when it will be ready for use at any time thereafter. Place about half teaspoonful in each hole over the infested ground. If placed above ground it will do much damage to birds. The best time to distribute the poison is on a bright warm day, following a cold March day.

Second: Dissolve one oz. powdered strichnia in 2 quarts of hot salt brine, strong enough to bear an egg up. Soak some common shingles in this 12 to 24 hours, cut into small pieces and lay at the holes or trails of the dogs.

This method provides against all danger of killing the birds.

After the fight has been inaugurated it should be kept up until the middle of May, going over the infested fields every ten days or two weeks. Farmers should remember that one dog killed in March is equal to killing five or six in May. Start the fight early and go at it earnestly and systematically.

J. W. Paxman, Specialist in Dry-Farming.

## DEMONSTRATION TRAIN

The biggest demonstration train ever run in the West, which is called a three state train, will serve Utah, Nevada and California. It will contain thirteen cars. One for livestock, one for irrigation and crops one for home economics, one tourist sleeper, one diner, one smoker, six freight cars, and an unusual feature—a special wool car. This train is under the direction of the Extension Departments of the Utah and Nevada Agricultural Colleges with some aid from California and will be operated from the 7th to the 28th of April.

## SPREAD YOUR MANURE NOW.

Now is the time to spread your manure it leaches and burns and a great percentage of the food content is lost. Every ton of manure is now worth \$2.00 but if it is let stand for six weeks or two months longer it decreases in value from 50 to 75 per cent. Yet the cost of getting it on the land is the same. Where possible

use a manure spreader which insures a uniform distribution. Do not place it in piles and let it stand for it will leach and ferment and the nitrogen and the other organic food compounds will burn out and be lost. Liquid manure is worth as much pound for pound as the solid and should be utilized. Keep up the fertility of the soil, insure yourself bigger and better crops, keep your corrals and barns clean and sanitary, save money and be prosperous. The proper use of manure is one of the biggest factors in securing this and no one can afford to neglect it.

## COLT DISTEMPER.

A great amount of colt distemper has been prevalent this winter. Dr. H. J. Frederick, advises us. This is infectious and is transmitted from one animal to another by contact, or by drinking from the same trough, eating from the same mangers or tying to the same tie post where infected animals had been. Infected animals should be given clean quarters and laxative food. Swelling under the jaws should be stimulated either by applying a linament, blister or poultice in order to promote their development. They should be opened and syringed out well with a disinfectant.

If the animal has difficulty in breathing administer a steam bath. For this purpose use half a pail full of boiling water containing about 2 or 3 per cent of creoline, carbolic acid or dysol. Place hot bricks or rock in the water to keep it steaming. Arrange the steaming solution near the horses nose so that it will be forced to inhale it.

The only safe method is to see that colts are vaccinated. A very efficacious vaccine for immunizing the colt against attacks is on the market. If an outbreak of the disease should occur in your community, every effort should be made to render the animals immune. Keep your stables clean and sanitary. Cleanliness is absolutely essential.

## HOW WE PRODUCE OUR SEED POTATOES

We, like other seed houses, have had considerable trouble to find suitable seed potatoes, stock we could recommend free from disease and which would be of special merit as to reproducing itself and we made up our minds to offer our customers stock that is true to type, color and size.

The Government has established a station for the production of pure, clean and suitable seed potatoes at Jerome, Idaho. A visit to the station convinced us that they had some clean stock which we wanted and we bought what they could spare, planted them on new sage-brush ground, watering them once, dried them up the latter part of July and harvested them the middle of October and got a yield of 40 bags per acre, none larger than hen eggs. Now we have a stock as firm as rocks, perfect in type and absolutely free from disease. We planted 45 acres of this seed stock on old alfalfa ground and produced 260 bags per acre. We also selected three varieties and sent them to the National Potato Show at Michigan and were awarded the first prize on each.

If you want potatoes of special merit, potatoes that will make you money, write us.

**VOGELER SEED CO.**  
Salt Lake City, Utah.

## RELIABLE FARM BARGAINS.

NOW is the time to buy right.

40 acres in Clinton, Davis county. Good house, stable and other outbuildings. Price only \$150 per acre, or will exchange for a home in Salt Lake.

29½ acres in Davis county. This is some of the best land in the state. Close to railroad station. This place sold several years ago for \$300 per acre, but can be had for considerably less now. Come in and let us tell you about it.

300 acres of very fine land in southern Idaho. This place is all under cultivation and has a full water right. Located on state highway, close to railroad station. Will sell all or part for only \$85 per acre, or will take a good farm near Ogden or Salt Lake as part payment.

Write, phone or come in and see our big listing of choice farms and ranches.

We have just what you want and can guarantee satisfaction.

Phone—Wasatch 963.  
KIMBALL and RICHARDS

"Land Merchants."  
56 and 58 Main St.,  
Salt Lake City, Utah.

## Sugar Cannot Be Made Better

If it were possible to make better sugar, we would. Our factories are scientific, efficient, sanitary; our raw products are the choice of the land; our factory men are experts who have spent years in mastering their art.

We are perfectly satisfied with Utah-Idaho Sugar, for we honestly believe it to be a little in the lead of all sugars in the race toward perfection. It is crystal white; it is fine and uniformly granulated; sweet as the sweetest, and absolutely pure. Order a sack today.

**UTAH-IDAHO SUGAR**  
ABSOLUTELY PURE





### The Chinese Woolflower

introduced by us last year has proved a great success everywhere and a most wonderful floral novelty. It is a *Celosia* of new form and easy growth. Plants throw out scores of branches bearing balls of crimson wool nearly a foot thick. Also many laterals with smaller heads, and fresh green foliage. Flowers form in June but none fade before frost, continuing to expand and glow with its wonderful crimson-scarlet color, very showy and succeeds anywhere.

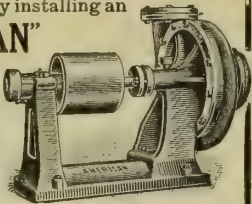
Seed per pkt. 10c., 3 for 25c., together with new TRAILING PETUNIA AND ANNUAL SWEET WILLIAM (fine novelties) free. Our Big Catalog of Flower and Veg. Seeds, Bulbs, Plants and rare new Fruits free. Write for it. JOHN LEWIS CHILDS, Inc., Floral Park, N. Y.

## IRRIGATE Your Field and Garden

Get larger yields and profits. Provide fire protection for your buildings, and water for your stock by installing an

### "AMERICAN" Centrifugal PUMP

Absolutely guaranteed. Write for new catalog.



THE AMERICAN WELL WORKS  
General Office & Works: Dept. 36, Aurora, Ill.  
Chicago Office: First National Bank Building.



### CALKO DIP

An insecticide and disinfectant for Cattle, Sheep, Hogs, Horses and Poultry  
45c qt., 75c half gal., \$1.25 gal., delivered.

### CALKO

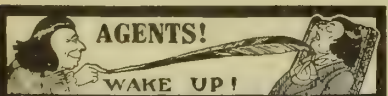
Stock Conditioner  
Keeps stock healthy and thriving.

CALKO HEALING POWDER heals saddle and collar galls, barb wire cuts, etc. Keeps flies flying.

Send in your order.

CALLISTER-KORTH CO.

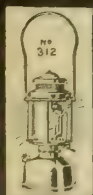
McIntyre Bldg., Salt Lake City, Utah



AGENTS!

WAKE UP!

Make \$30 to \$60 Weekly



Selling our new and unequalled Lanterns, Portables, Hollow Wire Systems and Gasoline Devices for Lighting City and Rural Homes, Stores, Halls, Churches. Most Powerful Light Known.

### WE LOAN YOU SAMPLES

Absolutely safe. More brilliant and many times cheaper than gas or electricity. Guaranteed two years. Everyone a possible customer. Send for free illustrated catalog. Large commissions. Exclusive territory free.

WRITE TODAY

SUNSHINE LIGHT CO.  
SALT LAKE CITY, UTAH

## A Saddle for \$36 Cash

Our latest Swell Fork Saddle, 14 inch swell front 28-inch wool lined skirt, 3-inch stirrup leather, 1/4 rig, made of best oak leather, guaranteed for ten years; beef hide covered, solid steel fork.

The Fred Mueller Saddle and Harness Co.

Dept. A.

1413 Larimer St.

Denver, Colo.

Send your name for our 1916 catalogue, now ready.



The Celebrated Mueller Saddle

## ROPE WORK—LET THE BOYS LEARN TO TIE A KNOT.

(Continued from page 2)

interlock the ends as shown in Fig. 170. Arrange the opposite strands in pairs in such a way that the twist in one will be the continuation of the twist in the other. Now tie a simple



FIG. 176

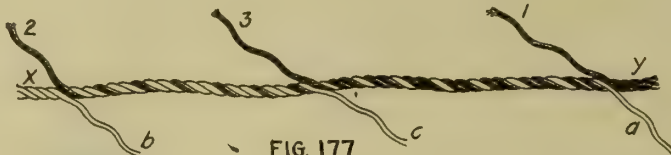


FIG. 177

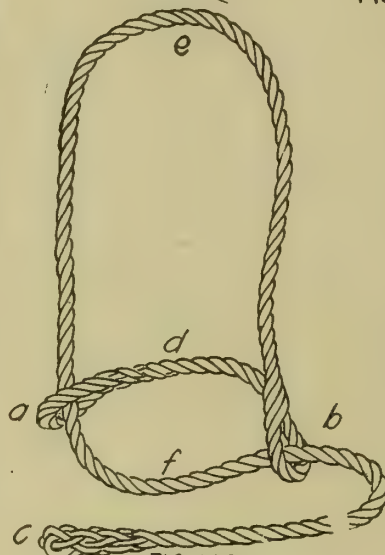


FIG. 185



FIG. 180

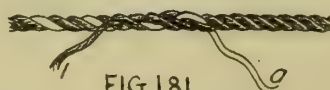


FIG. 181

overhand knot with each pair as shown in Fig. 171. Make firm knots and weave under and over diagonally at about right angles to the regular strands of the rope (Fig. 172). The ends should be tucked under the adjoining strands and finished similar to Fig. 173.

**Long Splice:** Untwist sixteen turns of each end of the rope and interlock as in the short splice. Hold the rope ends firmly in place, unwind any one strand eight turns and lay in its place the opposite strand that pairs with it (Fig. 175). In like manner unlay either of the strands from the other rope and follow up with the strand that pairs with it. The break in the rope is now distributed as in Fig. 177. Place the strands "b", "c", and "a" from the left, in front of strands 2, 3, and 1. Tie a right overhand knot in each case (Fig. 178) and weave over and under diagonally at about right angles to the strands of the regular rope (Figs. 179, 180, 181). The finish of the splice can be im-

proved materially by rolling it between two smooth boards.

**Rope Halter. Double Loop:** Make an eye splice as described in Figs. 166 and 169. Then at b, Fig. 185 make a loop splice so that the distance a d b is equal to about two-thirds the distance around the horse's

nose. Now pass the other end of the rope first through the eye splice then through the loop splice. In the finished halter, "e" is the head piece, "d" the nose piece, "f" the jaw piece, and "c" the end of the lead rope.

### A PERTINENT QUESTION

Little Helen was taken to church for the first time one Sunday. The service was a source of wonder to her, but after the alms basin had been passed and she had put in her mite, her curiosity was uncontrollable, and she turned to her mother.

"Mother," said she, "what do we get for our money?" —Judge.

Every farmer should know the amount of moisture there is in his land and how much is necessary for growing of anything planted therein.

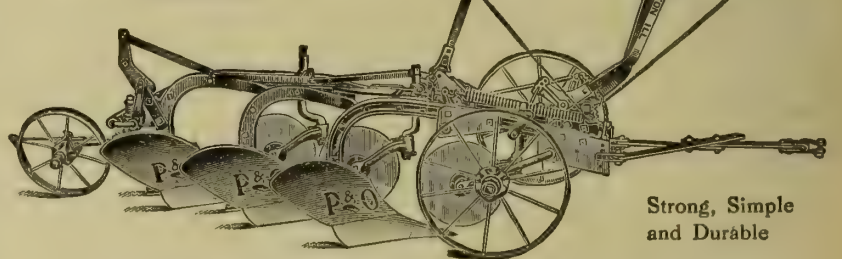


## ENGINE GANG PLOWS

Power and Lever Lift Mogul Engine Plows in from 4 to 12 furrow. Little Genius Power Lift in 2, 3 and 4 furrow. Senior in 5 and 6 furrow. Engine Grub Breakers weighing a ton and cutting a single furrow 24 inches wide by 12 inches deep. A line of engine plows with a world-wide reputation for strength, efficiency and ease of operation. "It's the Way We Build Them."

### P&O No. 2 Little Genius Power Lift Engine Gang Plow

Powerful and Positive Rear Wheel Lift; It Cannot Balk.



Strong, Simple and Durable

The little plow with a big record. High level lift on all three wheels. A single trip rope gives the operator sure and easy control. Pin break hitch, adjustable to all tractors. Any standard type of P & O Bottoms, the No. 2, two and three furrow in 12 and 14 inch, and the No. 3, four furrow in 14 inch.

Write for circulars and catalog. Explain your plow problems to us; we can give you valuable information. We make a P&O Engine Plow that will meet your requirements.



Ask Your Dealer or Write to Nearest P & O House

Parlin & Orendorff Co.  
Canton, Illinois

UTAH IMPLEMENT VEHICLE CO.  
Sales Agents  
Salt Lake City, Utah.



## "The Camel of the Grass Family"

We grew an enormous quantity of this last year and are prepared to supply all customers this season at

**Bargain Prices** Do not risk planting Sudan Grass seed from questionable sources. Remember Barteldes Seed Company has been in business for fifty years, and our reputation for square dealing is back of all our seeds.

It makes wonderful yield, even in droughty weather. Feterita seed from Barteldes yielded 85 bushel to the acre during drought of 1913, in spots too dry for corn or Kaffir.

## FETERITA

A Fit Companion to Sudan Grass. Most popular grain in Midd. West. Thirty-five to fifty days earlier than Kaffir. Less subject to attack by chinch bugs than other grains.

It makes wonderful yield, even in droughty weather. Feterita seed from Barteldes yielded 85 bushel to the acre during drought of 1913, in spots too dry for corn or Kaffir.

**SAMPLES FREE** together with big catalog and Pink List which gives lowest prices on all seeds in quantities.

**Books Free With \$5.00 Orders.** Choice of two well-bound volumes of "ready reference," Farm Guide or Cook Book.

**BARTELDES SEED CO.**

335 Massachusetts St., Lawrence, Kansas  
335 Main Street, Oklahoma City, Oklahoma  
335 Sixteenth Street, Denver, Colorado

### Big Money in Running Water

Let us start you in a business that will make you from \$15 to \$50 a day when farm work is slack. Other men have done it for years with an

#### Improved Powers Combined Well Boring and Drilling Machine

Same rig bores through any soil at rate of 100 ft. in 10 hours, and drills through rock. One team hauls and operates machine. Engine power if wanted. Easy to operate—no experts needed.

**Small investment; easy terms. Make machine pay for itself in a few weeks work.**

There is a big demand for wells to water stock and for irrigation. Write for free illustrated circulars showing different styles

**Lisle Manufacturing Co.**  
Box 978 Clarinda, Iowa

One Man  
One Team



# THE FARMERS' MARKET PLACE

**For the Buyer**

This market place offers our subscribers and readers a very good place to advertise. If you have something to sell or want to buy here is the place to tell it. These advertisements are read because they offer bargains, your bargain should be here. Take advantage of this opportunity today.

**For the Seller**

## THE GEM HERD.

### Improved Chester White Swine

The Home of the Western Prize Herd. My winnings at Idaho State Fair 1913, were 13 first, 3 seconds, champion boar and sow, and champion fat barrow. At a Tri-County fair held at Jerome, Ida., I took all but one second. I have anything wanted in Chesters from a weaning pig to a champion boar or sow at prices all can afford. High class stock. Write me.

For Reference—all old customers.

**GEO. H. LAWSHE.**

Falls City, Idaho

## FOR SALE

Foundation Stock in Holstein Fresian's and Duroc Jerseys. Will exchange a few for hay or grain. For breeding and particulars write

**JOHN W. STUBBS**

R. D. No. 2. Provo, Utah.

## Percheron Stallion

An unusual opportunity to purchase a good stallion. Foaled June 1913. Utah bred. Sire imported Damocles. Very large and finely developed. Direct all inquiries to B. T., Utah Farmer, Lehi, Utah.

## EGG MACHINES.

Our Leghorns are truly worthy of the name. Hardy Laying Paying Strains. We are offering the biggest chick bargain of the season—try us and be convinced. Ask for circular. **MANTI MAMMOTH HATCHERY CO.** Manti, Utah.

## WE MAKE

Farm and Ranch Loans in Utah, Idaho, Wyoming, Oregon and Colorado.

**MILLER & VIELE**

803-7 Kearns Bldg.  
Salt Lake City.

## BUTTER WRAPPERS

We carry a large stock of the Best Vegetable Parchment Butter Wrappers and Especially Prepared Ink for Printing the same. We furnish them Postage Prepaid at the following Prices, money to accompany order.

100	.....	\$ .90
200	.....	\$1.25
500	.....	\$2.00
1000	.....	\$2.75

Send all orders to

**THE UTAH FARMER**  
LEHI, UTAH

**BABY CHICKS & HATCHING EGGS**  
White Leghorns, Brown Leghorns, Barred Rocks, R. I. Reds, Black Minorcas, Anconas, Buff and White Orphingtons. Prices on application.

**THE ORLAND HATCHERY**  
Orland, Glenn Co. California

## FOR SALE

13 Registered Hereford Bulls. Also some females, 7 Registered Berkshire Boars, 20 bred sows, 2 Registered Angora Bucks and several Does. Also a fine lot of grade steer calves. Farm three miles north of Ephraim. Visitors met by appointment in Ephraim.

**JAMES G. OLSEN**

Kergo Farm Ephraim, Utah

First class Jersey calves for sale, CHEAP. Also one 2 year old bull and the old herd bull. All registered.

Apply to

**S. E. PRICE**

St. School for the Deaf and the Blind. Ogden, Utah.

## BABY CHICKS

Single Comb White Leghorns. The kind that pay for five or six years. Especially bred for long profitable service. Send for booklet. Early orders insure your wants.

**MOUND VIEW FARM**

R. D. No. 2 Brigham, Utah

## 4—BEST LAYING STRAINS—4

Rose Comb Rhode Island Reds and White Wyandottes, Single Comb Black Minorcas and White Leghorns. Egg fertility and stock guaranteed. Write your wants. E. C. Blanpied, Box 60, Milford Utah.

## IF YOU WANT

A BARGAIN

"SEE ME."

160 acres good land South Jordan; would come under ditch later. Why go hundreds of miles and pay more for poorer land? Only \$20 per acre. Right party can have same without any cash payment and on their own terms.

640 acres good land in Rich county, water right, 60 acres in hay, fine for hay, grain and ideal stock proposition. Take it for less than half what it is worth, \$15 per acre. Easy terms, or might take city property.

6400-acre cattle and sheep ranch in Montana, lot of first-class land, fine range, \$25 per acre. Terms.

Have good improved ranch in Wyoming, well stocked, independent water right, all stock and implements go. Take it for \$35,000. Terms.

**GEO. W. DANLEY**

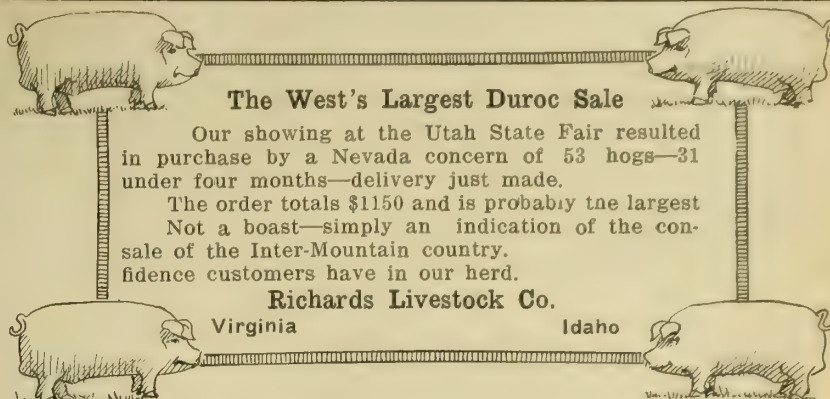
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SALT LAKE CITY

## Money to Loan

On improved farms with primary water rights, at reasonable rates."

**INTER-MOUNTAIN LIFE**  
**INSURANCE CO.**

11th Floor Boston, Bldg.  
Salt Lake City, Utah.



**The West's Largest Duroc Sale**

Our showing at the Utah State Fair resulted in purchase by a Nevada concern of 53 hogs—31 under four months—delivery just made.

The order totals \$1150 and is probably the largest Not a boast—simply an indication of the confidence customers have in our herd.

**Richards Livestock Co.**  
Virginia Idaho

**SALESMEN WANTED.**—Everywhere to sell our complete line of nursery stock. Donald Nursery Co. Donald, Oregon.

**TREES.** Thousands. We sell direct, save 50 per cent. Write for Planters Catalog and Prices. (No Agents) 25 years in business.—Carlton Nursery Co., Carlton, Oregon.

**SEEDS**—Direct from the worlds best growers. Sold to the planters at wholesale prices. Guarantee tag upon every shipment. Your moneys worth or your money back. Sudan grass seed only \$6.00 cwt. Other seeds of highest quality at lowest prices. Wholesale price list free. C. E. White Seed Co. Plainview, Texas.

**DRY-FARM MANAGER** wants position. Has good knowledge of farm practice feeds and live stock; dry farm crops, climate requirements; equipments etc.; technical and practical knowledge of oils and manipulation for crop production in dry regions. Will go anywhere; am single, sober, experienced, willing to work, business like and bound to make good; age 30; best of references. State wages you can give. Address A. D. care of Utah Farmer.

## FOR SALE

14½ acres land, near Spanish Fork, Utah. Also home in Spanish Fork. Cheap, good terms. Write

**E. I. EGILSON**

R. F. D. No. 2 Blackfoot, Idaho

## FOR SALE

200 stands of Bee's and all equipments, cheap, in good condition. No Foul Brood.

**WM. WITNEY**

Springville Utah

## Holsteins For Sale

Cherry Creek Dairy Farm offers Registered Cows, Bulls and Heifers. Sons and daughters of Rag Apple Korndyke 13th. Grand champion Utah State Fair 1915. Sire Rag Apple Korndyke. Dam, Fairview Mabel Korndyke A. R. O. record 25.51 pounds butter in seven days fat 4.83 per cent as a Jr. three years old. We offer 10 choice heifers age 2 months to one year for \$1000.00. A bargain for some one. Bulls from \$75.00 to \$150.00. Including a choice Bull calf 5 months old from Lady Netherland, 1st prize. Also 1st in milk and butter fat contest Cache County and Utah State Fair.

**NELSON BROS. Props.**

Richmond

Utah

**HOUSE AND BARN PLAN BOOK FREE**—Gives direct from-mill prices on many designs. Send us your carpenter's bill for quick estimate. Western Lumber and Millwork Company, Tacoma, Washington.

## CHOICE CANADA PEAS.

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GOOD HOUSE, BARNs AND OUTBUILDINGS

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Lease on 300 acres grazing land adjoining.

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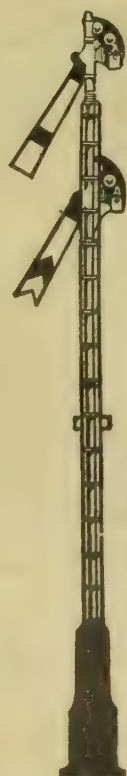
Only \$38.00 per acre—everything included.

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Is not a chance—it is the result of the expenditure of millions of dollars in money and the working-out of a positive plan of betterments, which has extended over a period of many years—

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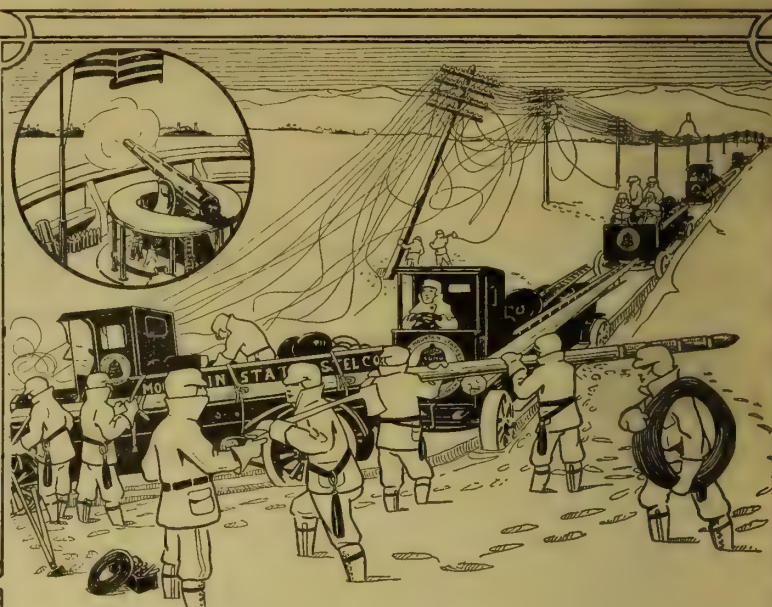
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Nations train armies and build navies for defense in case of possible invasion by hostile forces.

This promotes a sense of national security.

This Company maintains an army of men trained to defend your telephone service against the onslaughts of the elements. Preparedness in this case, instills a sense of individual security. Fire, flood and storm are a more or less constant menace to the plant through which the telephone-using public is served. In case of damage to our plant by fire, wind, water, snow, sleet or avalanche, the preparedness of our army is shown by the dispatch with which the service is restored.

When our lines go down, the busy man of affairs, the ranchman on the lonely prairie the miner in his mountain retreat, the grand dame in her mansion and the anxious mother in her humble cottage, watching at the bedside of her sick child, all find comfort in the knowledge that the trouble will be removed as quickly as the tireless efforts of trained men can accomplish it.

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Quick sale takes it for \$75.00 per acre.

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# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region

OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE

VOLUME XII; No. 32

LEHI AND SALT LAKE CITY, UTAH

MARCH 11, 1916



Pumping water from water-logged land, draining it for better cultivation, and using this same water for irrigation on another area are some of the problems that are being worked out in more than one district of this state.

Some farms have been practically ruined by the excessive use of irrigation water, this land can be redeemed by drainage.

Experience is teaching us many valuable lessons in the proper use of water in producing our crops.



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A GLANCE at Government reports shows how great a factor potatoes are becoming in Middle West production. Growers know that modern tools are necessary for satisfactory profit. Last year's crop is nearly 60 million short. Seed will be scarce and high. We have a Potato Planter that puts one piece in each place and one only.

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Ask your dealer to show them and write us for our representatives: Utah Implement-Vehicle Co., Salt Lake City, for separate booklets fully describing lines in which you are interested.

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POULTRY SUPPLIES

**Vogeler Seed Co.**  
Salt Lake City, Utah

## Now Is the Time to Fertilize Lawns

Home owners who wish to get the best results from their lawns should begin to work on them the last of February or early in March. Too many people delay giving any attention to their grass plots until the weather becomes warm and thus lose an opportunity to take advantage of melting snow and the alternate night freezing and thawing of the ground.

If the lawn has not already been fertilized, some form of commercial fertilizer should be used at once. Manure applied this late will not be effective in most cases. Ground bone is probably the best fertilizer to use, although tankage and fish scraps, some of which, however, have an unpleasant smell, also give good results. Prepared sheep manure is an excellent fertilizer for use at this season. Cottonseed meal where obtainable at a low enough price may be used to advantage. In connection with these fertilizers, however, it is desirable to use some wood ashes or other fertilizer containing potash. As fertilizers with this element are unusually high priced this year, the natural inclination will be to use minimum quantities. With soils that have been well fertilized in the past, failure to use a normal amount of potash will probably not affect the lawn badly in one season. These fertilizers should be applied at the earliest possible moment.

Temptation to get on the lawn and clean it up is strong as soon as the snow is gone and the weather begins to settle. Impatience, however, should be curbed until the ground is settled fairly well so that footmarks will not show in the turf. Where a lawn has been trampled down during the winter or played upon when it was soft in winter or early spring, the owner should take steps to compact its surface at the earliest possible moment. This compacting, however, should not be done until all trash has been removed. As soon as the ground is sufficiently settled so that a rake does not dig into the turf, the owner should rake it gently with a wooden-toothed rake. Frequently, however, all that is necessary is to pick off the litter. If a lawn has been covered with manure in the fall, it will be necessary to break the manure up with a rake in the spring, and remove some of the coarser portions. A wooden rake is best for this purpose, as it will leave so much more of the fine material upon the ground. Do not rake off so much of the manure that the lawn will have a thoroughly clean appearance. All of the fine manure that the summer growth of grass can possibly hide should be left. It is surprising how much litter the grass will obscure in a lawn, as one or two heavy rains will beat down a quantity of such material.

Before freezing weather is entirely over, fresh grass seed should be shown, for it must be remembered that only by repeated applications of grass seed can a good lawn be produced. The ordinary seeding of grass on a new lawn is 1 pound of seed to every 400 square feet—that is, to a piece 20 feet square. For reseeding a lawn, one-tenth to one-half of this amount should be used, according to

the condition of the lawn at the time. For the northern part of the United States, Kentucky blue grass and red-top are the standard varieties. However, where there are many bare spaces it will be found well to use some white clover. About one-tenth the quantity of clover as of the other grasses mentioned will be required.

Probably as good a time as any to apply grass seed will be some morning when the ground is frozen, so that when the ground thaws during the middle of the day the sown seed will be covered sufficiently to germinate well. The most successful seeding is that done while the ground is freezing a little each night and thawing again in the day time. Many people have success in sowing grass seed upon a light snowfall at a time when the snow is likely soon to melt. With either of these methods, however, there is danger that birds will eat some of the seed before it is covered in the soil. In spite of this, however, there is a better chance of getting a good lawn by these methods than when the seed is sown on land that will not quickly cover it.

The last operation in the preliminary spring care of a lawn is to give it a good rolling. This rolling, which should be done with a heavy roller as can be handled, should not be begun, however, until after the lawn is dry enough so that the roller passes over it without sinking at any point below the general level. If the land is too wet the roller will leave depressions. This rolling should be done just as soon as the land is dry enough to permit it, as rolling compacts the soil about the roots of the plants, brings them into closer contact with the soil, and gives them a better opportunity to make a quick start as soon as weather conditions are favorable.

Grass cutting should begin just as soon as the lawn mower can get a good hold. The very early cutting may be made with the lawn mower set close to the ground. As soon as the growth of grass becomes a little less vigorous, the mower should be set just as high as possible. This high cutting should be done as frequently as though the grass were being cut shorter.

### THE TIME TO PRUNE.

The pruning class of the Utah Agricultural College starts next Friday on its work in the apple and peach orchards of Cache Valley and it is time for every orchard owner to get this work done.

The intermountain fruit grower prunes at his leisure, but luckily this conforms rather closely to the proper season, when looked at from a physiological point of view. The Utah Agricultural College advises that pruning in the dormant season incites wood growth, while pruning in the growing season promotes fruitfulness and since trees in a semi-arid climate tend to over bear, it is logical to prune largely during the dormant season. If this work is done February, March and April, the wound heals over rapidly as soon as growth starts in the spring.

Now is the time to subscribe.

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VOLUME XII.

LEHI, UTAH, SATURDAY, MARCH 11, 1916

No. 32

## The Farm Tractor

L. R. Humpherys, Assistant Professor Farm Mechanics, U. A. C.

The tractor is passing through the same state of development that characterized the automobile twelve or fifteen years ago. At that time there was a great deal of severe criticism made against the automobile. Predictions of failure were made from every quarter. Legislators in several states even went so far as to urge the necessity of passing laws to prevent the automobile from being used on public highways. In view of these conditions the automobile industry grew and today is the greatest industry in the United States.

Like the automobile the possibilities of the tractor have been and are being ridiculed and its efficiency questioned. Yet the tractor business is increasing every year and the indications are that it, too, will be one of the great industries of the country.

The first tractor came on the market because of the demand in the Middle States and Canada for some quicker method of turning over the sod. These tractors were very large units and in some cases performed their duty well. The practice of manufacturing large units continued for several years. Many farmers bought these tractors and were unable to pay for them. As a result bankruptcy followed. A number of these earlier types of engines found their way to the West. Some were successful in the hands of good operators and many were not successful because of poor design.

This condition brought about a slump in the tractor business until about two years ago when the first small low-priced tractor appeared on the market. Farmers took more readily to the new machine. Other tractor companies seeing the possibility of the small tractor immediately designed engines to meet the new demand. The business grew in such proportions that the output has doubled each year during the last two seasons.

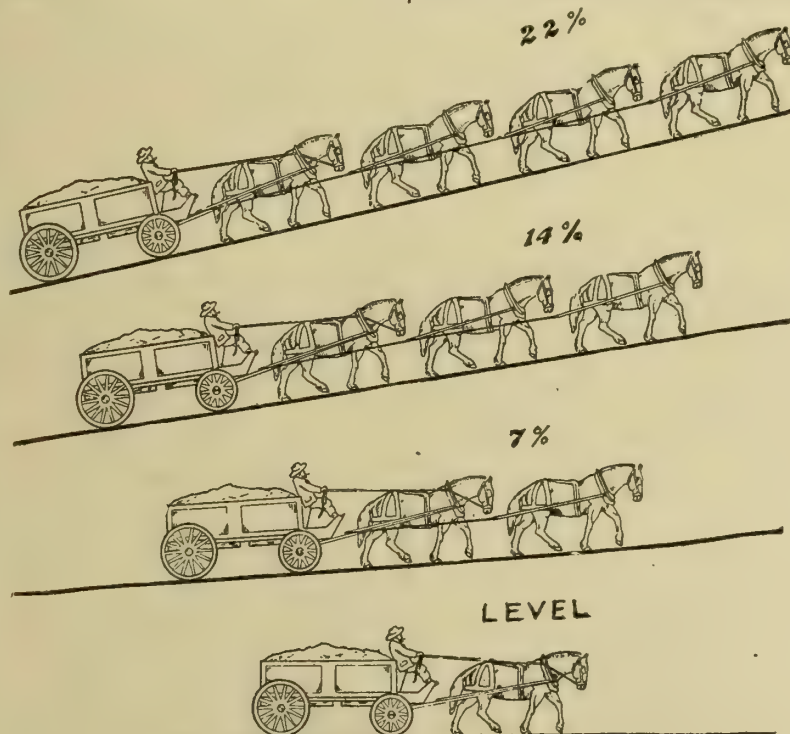
### Types of Tractors.

At the present time there are in the United States about one hundred sixty-five different companies manufacturing tractors of different types and sizes. No two of these tractors are alike. However, they may be classified in a general way into three classes: the heavy type, the so-called "automobile type," and a type embodying principles from the first two named. The manufacturers of these general types give reasons why their product is best. It must be stated that there is a great diversity in the principles of design and that very few if any of the present types will meet all the requirements of the farm.

There seems to be a decided effort for standardization. One of the most marked changes in design is the tendency for lighter weight and consequently the replacement of cast iron parts by steel parts. This is undoubtedly a step in the right direction and the great mass of engineers are directing their attention and energies toward building a successful small tractor.

### Effect of High Altitudes

It is common knowledge that the higher the altitude the less the power an engine can deliver. This statement is true for tractors, automobiles, or any type of gas engine. The main reason for this loss is that in high altitudes the atmospheric pressure and consequently the pressure in the cylinders at the time of ignition is much less than in low altitudes. There



### Ratings of Tractors.

Some tractors are rated in theoretical or empirical horse power, others are rated in terms of 1200 or 1500 pound work horses.

The tractor has two ratings, one the horse power it will deliver on the belt and the other the power it will deliver at the drawbar. To illustrate, a tractor that will develop 10 H. P. at the drawbar will develop 20 H. P. on the belt drive wheel. About one-half of this power is lost in the transmission gearing and in transporting the tractor itself.

Some tractor companies find it to their advantage to underrate while others to overrate their engines. No two engines are rated under the same conditions. Therefore, more attention should be paid to the work an engine will do rather than accept its rating. In any event the power of an engine materially changes with a change of altitude.

is also less oxygen for the same volume in high altitudes than in low altitudes and the intensity of the explosion (even though the carburetor adjustment is good) is therefore less in high altitudes than in low altitudes.

The first trouble can be overcome by using what are called high altitude pistons. These pistons are larger and give a higher compression than the ordinary piston. The second trouble cannot be overcome without special design. These losses are much greater than would ordinarily be supposed. The curve below shows the efficiency in per cent for various altitudes. It will be observed that at 5000 feet the efficiency is only 83 per cent of that at sea level. How much loss is there for your locality? Very often tractor companies confining their business more or less to central states will ship engines into high altitudes without looking into

the loss of power. Being unable to supply high altitude pistons, the tractor is more or less a failure.

### Effect of Grades

One of the most important questions to be confronted in this intermountain country is the effect of heavy grades on the efficiency of the tractor. There are many farms, portions of which have grades varying from 5 per cent to 12 per cent. The question is often asked, "what is the greatest percent grade I can afford to climb with a tractor and do work?" It is quite difficult to place any definite grade at which it will not pay, but we can safely say that it is very expensive to attempt to operate on grades of ten per cent or greater. A ten per cent grade means a rise of ten feet in one hundred feet.

In the figure below there is given a diagrammatical representation of the increase of power needed to pull a load with horses for various grades on ordinary gravel roads. The same principal holds for tractors. It can be seen from this diagram that for heavy grades less and less power will be available at the drawbar of a tractor because of the extra power required to transport the engine itself. This means a great decrease in the capacity of the engine and an increase in the cost of service.

### Requirement of a Tractor.

The requirements of a good farm tractor are many. Some points are more essential than others but the tractor or tractor company should be in keeping with the following points:

The tractor should not pack the soil excessively in plowing. It should be economical in fuel and lubrication consumption. The price should be consistent with the service it is able to give.

It should run a season without adjustment of bearings.

It should be accessible for repair, otherwise much time is lost in adjustment and overhauling.

The tractor company should supply repairs in the section where the tractor is operating so that in case of breakage new parts can be supplied immediately. Failure to give this service very often means failure of a crop.

The tractor should be adapted for general farm work.

"It must be simple and absolutely certain in operation when properly handled," or in other words, it must do the work.

The tractor company selling the tractor should stand back of their product to the extent that they will

(Continued on page 6)



## DAIRYING

### OBSERVATIONS FROM UTAH

I. W. Merrill, Dairy Development Department, De Laval Separator Co., Chicago.

Quite a change has taken place in Utah during the past five years. In every line of commercial activity there is a decided improvement and the advancement made is evidence of a united effort and a common faith in Utah's resources and future possibilities.

Her Agriculture, in most lines, has advanced by leaps and bounds. Dry Farming is now an assured system. Diversified systems are becoming more popular and the profits made from this plan is the proof of its practicability.

The Sugar factories are paying uniformly high prices for beets so that this crop pays good interest on high priced land and good wages to all who work in the beet fields.

In dairying, outside of the famous Cache Valley, little if any advancement has been made. This is the strange part of my observations, for of all sections of the country I have visited during the past five years—Utah stands foremost—in fact heads the list for possible development of the Dairy Industry: A soil suitable for growing the right kind of feed for dairy cows. An alfalfa crop, which could be converted into dairy products and increase its market value three or four times; an abundant water supply; an almost perfect, yearly climatic condition; a system of railroads which reach the choicest dairy sections furnishing means for transportation, in face these conditions and many more that contribute to profitable dairying in less favored sections are found on every hand in Utah.

There used to be nearly five times the number of creameries in the state than there are now. The creamery butter was of higher grade than it is now and there was more incentive to dairy then, than there is now.

Prof. F. B. Linfield—who was professor of Dairying and Animal Husbandry at the Agricultural College—did a magnificent work in starting the dairy industry in Utah. I believe I am safe in saying that he did more real constructive work than was ever done before or than has ever been done since.

Cache Valley is an exception to the conditions mentioned. The advancement made in this little valley is little short of wonderful and there are only a few sections in the entire western country that can compare with it. The extent to which the farmers there have developed and improved their dairy herds is phenomenal. The increased value of the farming land is coincident with high priced lands in other dairy sections.

The prices paid to the farmers of Cache Valley are uniformly higher than have been paid in any other section with which I am familiar, the high quality of milk and cream delivered to the factories is splendid evidence of the pride and profit, the two factors which make for good dairying in Cache Valley.

Here is the best evidence I have ever seen of the fundamental truth that there must be a profit to the producer of the raw material before there can be development that is at all permanent and encouraging. And again, when the farmer is close to his market, with an opportunity of sharing in the profits of the manufacture of his raw materials and can be proud of the increasing demand for the products of his home town, then he has an incentive to work, to grow, to boost, to be a moving force in developing the resources of his community.

The dairy story of Kansas and Nebraska is repeating itself today in Utah and Idaho. Closed creameries and low prices, cows for sale and mortgages made.

Prices for butterfat vary from 4 cents to 10 cents lower in Utah than in Minnesota and the people are not nearly so enthusiastic over dairying in Utah as they are in Minnesota, because it does not pay them to be so.

Utah needs a lot of dairy enthusiasm, dairy interest, dairy encouragement and dairy knowledge.

Utah needs a dairy building at the Agricultural College wherein dairying can be emphasized and where men can be trained in the principles of butter making, cheese making, ice-cream making and the making of other dairy products and in managing and operating local creameries.

Utah needs to supervise more control over the industry and prevent the centralization of dairy marketing and dairy profits.

Utah dairymen must remember that quality of product is the corner stone of the industry and that quality can be obtained only by delivering to the place of manufacture, which should be as near as possible to the source of production, a clean sweet natural product and this can not be done when cream or milk is shipped long distances over the railroad.

Utah dairymen must realize that a good dairy cow will pay a bigger price for alfalfa hay, oats and barley, corn silage or oat and pea silage, roots of various kinds can be obtained elsewhere and Utah people must remember that the high priced farm lands of the world are the dairy lands. The most fertile lands are the dairy lands—the biggest crop-producing lands are the dairy lands—the most permanent and profitable agriculture is dairy agriculture



## Which will you buy a "Cream Thief" or a "Savings Bank" Cream Separator?

WITH a great many machines or implements used on the farm it doesn't make much difference which of several makes you buy. One may give you a little better or longer service than another, but it's mostly a matter of individual preference and often it makes little difference which one you choose.

Not so with buying a cream separator, however.

There is a big difference in cream separators.

The most wasteful machine on the farm is a cheap, inferior or half worn-out cream separator.

The most profitable machine on the farm is a

## DE LAVAL Cream Separator

A cream separator is used twice a day, 730 times a year, and if it wastes a little cream every time you use it it's a "cream thief," and an expensive machine even if you got it as a gift.

But if it skims clean to the one or two hundredths of one per cent., as thousands and thousands of tests with a Babcock Tester show the De Laval does, then it's a cream saver, and the most profitable machine or implement on the farm—a real "savings bank" for its fortunate owner.

But cleaner skimming isn't the only advantage the De Laval user enjoys.

There are many others, such as long life, easier turning, easier washing, less cost for repairs, and the better quality of De Laval cream, which, together with its cleaner skimming, make the De Laval the best as well as the most economical cream separator.

If you need a De Laval right now there is no reason why you should let its first cost stand in the way, because it may be purchased on such liberal terms that it will actually pay for itself out of its own savings.

A De Laval catalog to be had for the asking tells more fully why the De Laval is a "savings bank" cream separator, or the local De Laval agent will be glad to explain the many points of De Laval superiority. If you don't know the nearest local agent simply write the nearest De Laval main office as below.

## THE DE LAVAL SEPARATOR CO.

165 Broadway, New York 29 E. Madison St., Chicago  
50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER

It will be of advantage to you to identify yourself with a large, steadily growing bank like this.

Business may be transacted by mail.

## Walker Brothers Bankers

SALT LAKE CITY  
Founded 1859. "A Tower of Strength."



## SEED POTATOES

Another large consignment of Pure Bred Red River Grown OHIOS, IRISH Cobblers, Green Mountain and Rural's will reach us this week.

This stock was selected after critical comparisons with samples from all the leading Potato Districts of America.

While the cost is a trifle more, you and all the rest of the up-to-date growers know the BEST is the cheapest.

Let us help you control the Potato Disease Problem. Full information cheerfully given.

WRITE US TODAY

If you haven't our Seed Book ask for free copy.

## PORTER-WALTON CO.

Seed and Nursery Specialists

SALT LAKE

—and the best home builders—community developers and the highest type of citizenship is found in communities where dairying prevails.



# Fakes, Like the Poor, Are Always With Us

This is the first of a series of articles prepared by the State Board of Health and the State Dairy and Food Department.

The State Dairy and Food Department and the State Board of Health appreciate conjointly the privilege of contributing an article from time to time on false advertising, fake "cure alls," nostrums, quack and kindred subjects, there is in our minds great necessity for a word of warning to the public upon these matters which by some has been termed "The Great American Fraud."

A few newspapers, magazines and periodicals in this country have taken a definite and fearless stand against these evils and will not allow their columns to be prostituted by the advertising of such fakes, such a stand is certainly to be commended and we are pleased that the Utah Farmer is among this class of publications and you are entitled to the public appreciation and confidence.

Protection against false fraudulent and frequently vicious advertising should be the public's right, and by every rule of honor they are entitled to, and should demand it. For when one lies to another it becomes a personal matter but when a newspaper fails to stand for truth it has failed in its great mission to the public. A newspaper or periodical which lends its advertising columns to such immoral business practices becomes an accomplice in an unrighteous act, and there are many who believe that those who are guilty of such practices are in the position of an accessory in a crime of obtaining money under false pretense. The lie in advertising is resorted to for the purpose of obtaining money under false pretense for one who will lie in advertising does not intend to give value received for the lie is used to conceal the real value of the commodity advertised, such immoral practices are certainly in restraint of legitimate trade for it pollutes the channels of commercial activities and should with proper and adequate law be suppressed.

This evil of commercial lying became so pronounced among the manufacturers of foods and the vendors of patent or secret medicines in the labeling of such that the Federal Government and the various States were compelled to protect the citizens by the enactment of what is known as the Pure Food and Drug Law, the purpose of this law is to compel manufacturers and vendors to confine their statements on the label to the truth. The enforcement of this law in a few years time has caused a great change to come over some of the labels of these commodities, those who were misleading and deceiving were compelled by law to reform and the change that was compelled in the labeling of most patent medicines made them look like the devil must have looked when he posed as an angel of light, but this reform, in

many cases, was not true repentance and therefore, was not complete, and it only needed an opportunity and an avenue for the evil to manifest itself and such an avenue presented itself or rather was unfortunately left open to them through the medium of the newspapers of publications.

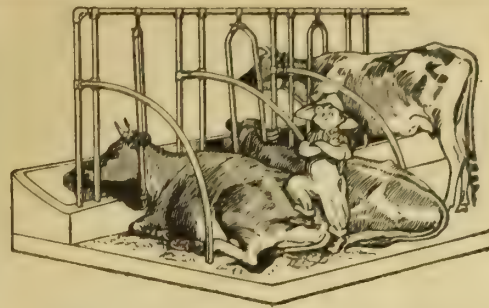
There is no law prohibiting publishers or printers accepting any and all advertisements, they therefore, in most cases, at least, become too willing aids to these quacks and fakers for the advertising money has been liberally used in these campaigns to delude some of the people in our communities to take these nostrums and fake "cure alls" for any ill that they may have.

If we were to believe what is said in most of the advertisements pertaining to these nostrums, we would naturally conclude that the human race is buried in a most alarming condition of disease, sickness, suffering and deformities and that its only possibility of hope, salvation, recovery or happiness is by using this, that or the other. The composition of this concoction, which will rejuvenate physically the human race, is a secret, but we dupes are expected to swallow nostrums, promises, secrets and all, however, we must first contribute a "little" cash in order that the wonderful philanthropic "cure all" movement will go on.

These lies could be laughed at, for they would constitute a huge joke, if it were not for the fact that there are some among us who are sick, diseased and suffering, who are fighting desperately for the God-given privilege of life, health and vigor, and their last dollar will be spent to accomplish that blessing. Frequently, in their weakened condition, they have not the power to discern between truthful and false advertisements, and when words indicating hope appear in an advertisement they are looked upon almost with the same eagerness that a drowning man clutches at a straw. The advertisers of nostrums and fake cures know this weakness, eagerness and hope that the diseased, sick and suffering have, and prey upon it as a monster would his victim. But, the monster's quest may be as a matter of self-preservation, but with these human vultures, it is for the purpose of obtaining blood money from these poor dupes who are in some cases, at least, on the brink of the grave. With hope and desperation they are influenced to take treatment from these parasites, and then, still having hope and trust, are influenced to testify in the form of the well known testimonial such as "After trying this, that and the other with no apparent benefit, after one bottle of such and such a remedy, health and happiness and prosperity is the result."

It may be asked if we class all patent medicines, nostrums and fakes and the promoters in the same class, and we are compelled to answer, that if the manufacturers and vendors confine themselves in their state-

(Continued on page 13)



## Give Your Cows And Yourself A Square Deal

Louden Tubular  
Steel Stalls meet  
every requirement

Takes a Justifiable Pride In His Barn.

for the comfort of the stock and the convenience of the workmen.

They are strong, comfortable and sanitary. They minimize the labor of caring for the cows. The installation is not difficult, and when set in cement the equipment has greater permanency than even the building itself.

The owner of a Loudened barn takes a justifiable pride in his equipment. It improves the appearance of his building and exhibits his herd to better advantage.

Write today for free illustrated catalog.

### The Loudened Line Includes

Steel Stalls and Stanchions.  
Steel Animal Pens.  
Litter and Feed Carriers.  
Hay Tools.  
Barn Door Hangers.  
Power Hoists.  
Horse Barn Fittings.  
"Everything For the Barn."

### Miller-Cahoon Co.

Murray, Utah.  
Idaho Falls, Idaho.



A Popular Stall at a Moderate Price.

## Bread to the Country Fresh Every Day

People in the country enjoy eating good, fresh Royal Table Queen—"The Perfect Bread." It is shipped by express in new, clean cases, with all of its original purity, quality and goodness properly protected. Ask your grocer for—

**ROYAL  
TABLE QUEEN**  
"The Perfect Bread"

and just get a taste of this perfect bread. You'll like it from the first bite. It is the last word in bread making—the masterpiece of scientific breadmakers.

SAVE THE LABELS—they are valuable in securing



useful household articles offered as premiums by the Royal Baking Company. You get them at the same price we pay when we buy in carload lots. Ask your grocer about our money saving plan.

**Royal Baking Co., Salt Lake City, Utah**

**EAR PERFECT  
TAGS**  
Samples Free  
ATTACHED INSTANTANEOUSLY  
Name and Address. Numbered if Desired.  
LEG BANDS for Poultry, Pigeons, Turkeys  
SALT LAKE STAMP CO. Salt Lake, Utah.

Mention the Utah Farmer went answering advertisements.



# JOHN DEERE Plows for Light Tractors



## High and Level Lift

**PRACTICAL**—the right size for the average farm. Work with any standard tractor. Controlled by the man on the tractor.

Pull the rope and all the bottoms raise high and level. Another pull lets them down.

All bottoms raise high—like a double bail, high lift horse plow. You know from experience what this means. Plows do not clog or gather trash on the turn.

Extra wide and semi-floating front truck means uniform work and even depth of plowing.

Extra beam and bottom, readily attached, increases a regular two-bottom plow to a three bottom or a regular three-bottom plow to a four, as desired.

Famous John Deere Bottoms with Quick Detachable Shares that are taken off and put on in one-fifth the time it takes to change bolted shares. Booklet free.



## "R & V" Engines

### Dependable Farm Power

**"R & V" Triumph**—always develops rated horse power—made in 1, 1½, 2½, 4, 6, 8, 10, 12, 16 and 20 H.P. sizes, stationary and portable.

Easily started; perfect speed control (speed can be varied 40 per cent without stopping engine). Complies with insurance regulations. Hopper cooled—a simple, efficient system that does not require long pipes and numerous fittings. Write for free booklet.



## John Deere Spreader

### THREE exclusive features:

1. Beater on the axle—nothing else like it.
2. Revolving Rake—load moving back to beater revolves the rake. Draft actually less. Even spread certain—no bunching.
3. Ball Bearing Eccentric Apron Drive. Requires no attention. Performs wonders in the working of the spreader. Write for Booklet.

**BOOK FREE "BETTER FARM IMPLEMENTS AND HOW TO USE THEM"**—168 page reference book—tells all about a complete line of implements and how to adjust and use many of them. Worth dollars. Sent free to any one who tells what implements he is interested in. Ask for Package X-160.

**JOHN DEERE, Moline, Ill.**  
For Sale by John Deere Dealers Everywhere

## THE FARM TRACTOR

(Continued from page 3)

take a personal interest in the tractor after the sale is made and make good their guarantee. Too often a company's interest ceases after the sale is made. Their job is only half completed.

### The Tractor's Place on the Farm.

Much has been said by farm papers and manufacturing establishments about the elimination of the horse from the farm. A great many figures have been given to show that the tractor is cheaper than the horse for farm work. In some cases these figures are fair and in other cases entirely unfair. The price of fuel and oil are much cheaper in eastern sections than in western sections. Very often the figures published in advertising circulars should be closely inspected. In like manner the cost of horses and their maintenance varies in different sections.

The tractor problem is of such a nature that it must be figured out for every particular case and compared with the solution the horse affords. In figuring the cost of a tractor the following elements should be considered: first cost, service, depreciation, interest on investment, repairs, labor, fuel and oil, storage, taxes and insurance.

At the present time tractors are selling for from \$75 to \$125 per horse power drawbar. This could be greatly reduced if they were manufactured on a larger scale.

In figuring the cost of the horse on the farm the following points should be considered: the first cost, service, increase, depreciation, interest on investment, veterinary services, labor, food, care and taxes.

The horse possesses one quality that the tractor does not have, reserve power and flexibility. He is able to increase his power several times for short periods of time in case of emergencies. This the tractor is unable to do except in a limited way. For this reason some reserve power should be allowed in purchasing an engine.

The horse will always play a very important part on the farm. We will probably never see an era of horseless farms. However, the work of the horse will be more and more limited as time goes on. He will be relieved by the tractor of a great deal of drudgery. These statements will be particularly true for the dry farm.

In a great many cases we have been mining the soil rather than cultivating it. A realization of the need for deeper plowing is being felt. This will mean additional power. This power can be supplied for large areas by a well designed tractor at a cost less than it can be done with horses in the majority of cases.

The tractor has come to stay. It is for every individual farmer to analyze his case to see whether or not he has enough work to justify the purchase of an engine. It is certain that the small tractor when standardized will supply a great many of the needs of the ordinary farmer.

### Need for Knowledge of Operation.

Some tractors fail because of poorly designed parts, others fail for the want of a good operator. A successful tractor operator must have more skill than is ordinarily used in operating other farm implements. He must be able to locate engine troubles at any time and make the ordinary

repairs and thus prevent expensive delays. He must know more than the ordinary automobile operator because the tractor is nearly always working at its full capacity while the automobile rarely works for any length of time at full capacity and consequently a limited strain on the car as compared with the strain on the tractor.

At the present time in this locality about one man in ten is really competent to handle a tractor. It will take a number of years to relieve this condition. More attention must be given by operators and prospective operators to a working knowledge of the tractor if it is to be a success. It will take some time to bring this about.

## THE TIME OF THE YEAR IN WHICH THE RAIN FALLS

### Agricultural Lesson.

Prof. J. C. Hogenson.

It will be observed that in the Northern Section there is quite a uniform rainfall from October to May, inclusive. The uniformity of rainfall is of importance because it results in the smallest possible waste. Sudden heavy rains are not desirable. It would be better if a slightly heavier rainfall would occur in June to aid the ripening plants.

In the Middle Section the rainfall is quite uniform. The rainfall for June is lower, that for July slightly higher, August and September receive more rain in the Middle Section than in the Northern Section but October and November receive less, March is the wettest month in both sections.

In the Southern Section the climate is milder and more uniform throughout the year so that a greater loss by evaporation is likely to occur. The rainfall too is not much heavier in the winter than in the summer.

It is sometimes thought that it matters little when the rain comes just so there are from 12 to 15 inches during the year. From collected data, however, it would appear that we ought, at least, to have four inches during the growing period of the plant. Experience shows that rains in June and early July are of the greatest benefit to dry farm crops. If the precipitation during these months comes in one of two rains, the crops benefit immensely by it, but when a large number of small showers make up the total, the effect on the crop is not so favorable. The main dependence of the dry farmer, however, must always be the rains and snows of winter and early spring that sink into the soil and remain stored there.

### Climatic Conditions.

Plants thrive best only in certain temperatures, and when they receive a certain amount of sunshine. Both of these conditions are well furnished in Utah. The state has an average about 55 per cent of clear days, 25 per cent that are partly clear, and 20 per cent that are cloudy. In the summer the proportion of sunny days is much higher.

With regard to temperature, the average from May to September, inclusive, is 65 degrees, F., which is very favorable to plant growth.

### Humidity of Utah Atmosphere.

It is natural to suppose that the air in the vicinity of the lakes of Utah, because of the large amount of water which evaporate annually, would be much more moist than the



## NOW! A Combination Plowing and Threshing Outfit—

### Any Size You Want

**T**HERE are five sizes of Avery Combination Plowing and Threshing Outfits—a small 8-16 H. P. Tractor, 3 bottom Plow and 19x30 inch Thresher up to a large 40-80 H. P. Tractor, 10 bottom Plow and 42 x 70 inch Thresher.

There's a size Avery Plow Outfit for any size farm and a size Avery Thresher for any size run.

Avery Tractors deliver strong traction power for plowing and steady belt power for threshing. Avery Plows are original patented "Self-Lift." There are more acres plowed by Avery Tractors and Plows than by any other make. Avery Threshers have made the best proven grain saving records. Average in 27 tests was 99.9-10 per cent.

Get a complete Plowing and Threshing Outfit built and backed by our company. Large factory and many branch houses insure prompt and permanent service. Write now for new 1916 complete Avery Catalog. Address

**EVERY COMPANY**  
2573 Iowa Street PEORIA, ILL.

Ask for address of the nearest Branch House or Jobber.



One Man Outfits 6 Sizes Fit Any Size Farm



Buy Your  
**LUMBER**  
Direct From  
**MILL**

**SAVE 20 to 50%**

Draw up a list of what you want on Your Next Lumber Bill and mail it to us. We ship you direct and cut out the middleman's profit.

We give you Fir lumber fresh from the saw, clear and clean. Guaranteed quality and prompt shipments.

Write Today—  
We will Save  
You Money

**Pacific Coast  
Sawmill Company**

832 Dekum Building Portland, Oregon.

## Chicks That Live



Stop wasting eggs—stop losing chicks—with cheap incubators. A Queen costs but little more, and the extra chicks it will hatch, and that will live and grow, soon pay for it.

## QUEEN INCUBATORS

Alfred Cramer, Morrison, Mo., says: "I have operated about ten other incubators and the Queen is superior to any of them." S. L. Todd, Green Forest, Ark., says: "I have tried six other machines, high and low priced, and the Queen is the best incubator I ever saw." Book Free.

**QUEEN INCUBATOR CO., 162 Bryd Ave., Lincoln, Neb.**  
**Queen Incubator Sold by PORTER-WALTON CO., Salt Lake City, Utah.**

Mention Utah Farmer when you write.



air in other portions of the state removed from large bodies of water, and as a consequence evaporation from the soil there would be less rapid. By humidity is meant the actual amount of water held by the air as compared with the highest possible amount (represented by 100) that it can hold. The higher the humidity the wetter the air. The average humidity for Utah atmosphere is 38. The drier and warmer the air, the more rapid will evaporation from the soil occur. This being the case, the dry farmer in Southern Utah where the air is drier and warmer, must give more careful attention to the proper treatment of the soil for the conservation of moisture, than the farmer in the North. There is, however, not enough difference to affect seriously the possibility of dry farming in any part of the state.

**The Soils of the State.**  
The mountain ranges of Utah are made of massive beds of limestone and dolomite, heavily charged with

HOW WE PRODUCE OUR SEED POTATOES

We, like other seed houses, have had considerable trouble to find suitable seed potatoes, stock we could recommend free from disease and which would be of special merit as to reproducing itself and we made up our minds to offer our customers stock that is true to type, color and size.

The Government has established a station for the production of pure, clean and suitable seed potatoes at Jerome, Idaho. A visit to the station convinced us that they had some clean stock which we wanted and we bought what they could spare, planted them on new sage-brush ground, watering them once, dried them up the latter part of July and harvested them the middle of October and got a yield of 40 bags per acre, none larger than hen eggs. Now we have a stock as firm as rocks, perfect in type and absolutely free from disease. We planted 45 acres of this seed stock on old alfalfa ground and produced 260 bags per acre. We also selected three varieties and sent them to the National Potato Show at Michigan and were awarded the first prize on each.

If you want potatoes of special merit, potatoes that will make you money, write us.

VOGELER SEED CO.  
Salt Lake City, Utah.

Experts Endorse Beet Sugar

Not only have government experts and scientists declared that beet sugar, highly refined, is the same, chemically, as cane sugar, but the greatest cooks and bakers have also added their endorsement of Table and Preserving Sugar, made from western-grown beets.

AMALGAMATED SUGAR CO.

sand. The surface crack belong to the Silurian Era, while deeper down are found limestones from the carboniferous era.

The great depth of the soils make it possible to store a large quantity of water in them. Under common conditions each foot of soil is able to retain 6¾ inches of rainfall.

A lake at one time covered the greater part of Western Utah, and the greater part of Nevada. The outlet of this lake was at the North end of Cache Valley. That this vast area was once submerged is easily proven. Standing on any elevated ground the beach marks may easily be traced for miles along the side of the mountains. About the water line, the mountains are cut up into great furrows and separated by sharp angular ridges. Below the water line all is round and smooth in outline.

Utah soils are rich in plant food. They are alluvial in their nature. The mountains, having been the source of all the soils. In many cases soil to the depth of 500 feet has been washed from the mountains in to the valleys. There are, of course, shallow soils also. These occur mostly on the benches near the mouths of canyons, which are old deltas left by lake Bonneville. In many parts of the state the soil is underlaid by water. The most common cause of this is a stratum of rock or clay some feet below the surface which continues in an unbroken shut to the mountains and along which water can seep.

**Soils and Dry Farming.**  
The percentage of moisture in sandy soils is much smaller than that in clay. The following table gives the actual conditions:

Depth	Wheat Loam	Wheat Sandy	Wheat Clay	Wheat Heavy	Wheat Clay	Wheat Heavy	Wheat Clay
1 ft.	4.71	5.09	7.99	6.83	10.93	18.07	
2 ft.	5.03	9.17	13.90	7.99	12.68	24.69	
3 ft.	4.16	9.35	14.67	21.50	16.49	27.18	
4 ft.	4.21	9.71	16.55	21.35	27.06	33.90	
5 ft.	4.32	11.74	16.55	23.52	30.38	40.09	
6 ft.	4.60			22.25		48.29	
7 ft.	4.54			20.70		46.20	
8 ft.	5.82			24.13		44.84	
9 ft.	5.55			24.69		45.35	
10 ft.	13.70			24.21		46.20	

Because sandy soils contain less water it must not be inferred that they contain less water available to plants than do clayey ones. Water is held as a film around soil grains. If the thickness of this film is the same in different soils, the available water will be relatively the same. Since sand grains are larger than clay grains there will be a smaller number on a given volume, or weight of soil and a smaller amount of water will produce a water film of a definite thickness. It is said that 4 per cent of water in a sandy soil is as valuable to the plant as 12 per cent in a heavy clay soil. The greater portion of the soils of the state are suitable for arid farming not only clays, and loams, but also sandy soils, under proper treatment will give good yields to the dry farmer.

**SALT LAKE FASHION SHOW**  
MARCH 13-14-15  
Excursion rates via Salt Lake Route  
Excursion rates from all Utah stations Salt Lake Route as follows:  
From Eureka, Mammoth, Silver City, Tintic, Nephi, and points East March 13 and 14th. All other stations March 12 and 13th. Tickets good returning until March 17th.

# It took 301½ days

of the hardest kind of service to wear out this pair of

## Goodrich "HIPRESS"

—The Rubber Boots and Shoes

"With the Red-Line 'round the top"

We've been giving you actual instances of the remarkable superiority of the MOLDED RED-LINE Rubber Footwear. Here's another that came to us recently. Willard Crane, of Martel, Warren county, Ohio, started in February with a pair of "HIPRESS" and wore them steadily 301½ days before they would give in. The roughest usage imaginable—concreting, railroad work, tile ditching, etc. Said he had been buying three pairs of boots a year for ten years until he tried "HIPRESS." He is so enthusiastic that he went before a notary and made the above statement under oath, sending us a copy. That's the service "HIPRESS" is giving—it is so far ahead of the ordinary boot and shoe that there is no comparison. "HIPRESS" is made of the same tough rubber that goes into Goodrich Auto Tires—MOLDED INTO ONE SOLID PIECE! Weakness of the hand-made boot thus not possible—they'll outwear anything on the market. Remember—Goodrich is the only concern making these wonderful boots and shoes—you can tell the genuine by the RED-LINE 'ROUND THE TOP.

Come in all styles—short boots, hip boots, paces, arctics, etc.

**The B. F. Goodrich Company**  
AKRON, OHIO


Makers of the Celebrated Goodrich Automobile Tires—"Best in the Long Run"



When you buy Rubber Overshoes insist on the genuine Goodrich-made

## "STRAIGHT-LINE"

for best fit—longest wear



# SUDAN GRASS



**"The Camel of the Grass Family"**  
We grew an enormous quantity of this last year and are prepared to supply all customers this season at **Bargain Prices**. Do not risk planting Sudan Grass seed from questionable sources. Remember Barteldes Seed Company has been in business for fifty years, and our reputation for square dealing is back of all our seeds.

## FETERITA

A Fit Companion to Sudan Grass.  
Most popular grain in Middle West. Thirty-five to fifty days earlier than Kaffir. Less subject to attack by chinch bugs than other grains.  
It makes wonderful yield, even in droughty weather. Feterita seed from Barteldes yielded 85 bushel to the acre during drought of 1913, in spots too dry for corn or Kaffir.

**SAMPLES FREE** together with big catalog and Pink List which gives lowest prices on all seeds in quantities.  
**Books Free With \$5.00 Orders.** Choice of two well-bound volumes of "ready reference," Farm Guide or Cook Book.

**BARTELDES SEED CO.**  
335 Massachusetts St., Lawrence, Kansas  
335 Main Street, Oklahoma City, Oklahoma  
335 Sixteenth Street, Denver, Colorado

## Cut the Cost



**Martin FARM DITCHER AND ROAD GRADER**  
PAT. MAR. 24, 1915

## Of Ditching

Drainage and irrigation ditches are easily made and cleaned out with this improved light draft ditching machine. Makes V-shaped ditch with a slope of 45 degrees—sides won't cave in. Unequaled for hill-side work, road grading, terracing, building rice levees and borders. Reversible—easy to operate.

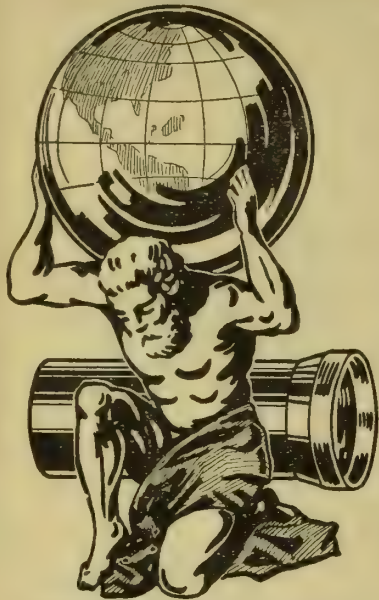
**All Steel, Simple, Practical**  
No wheels or levers to break or get out of fix. Lasts a lifetime. Quickly pays for itself. Price only one-fifth of big clumsy machines—does same work. Thousands of satisfied users throughout the United States.

**Sold On 10 Days' Trial**  
with money-back guarantee. Write today for free illustrated booklet and full particulars.

**OWENSBORO DITCHER & GRADER CO., Inc.**  
Western Branch  
248 Evans Block—Denver, Col.

ANSWER THE ADVERTISERS.  
in this issue and tell them that you saw their adv. in the UTAH Farmer. They like to know where they get the best returns





CONCRETE SEWER AND IRRIGATION PIPE.

They Grow Harder and Stronger With Age. All Other Pipes Decline.  
ABSOLUTELY ALKALI PROOF  
UTAH CONCRETE PIPE COMPANY  
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**MODERN MACHINERY**  
**LANDES & CO.**  
Phone Has. 830  
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DEAL-  
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ATTENTION!

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sure it is in the garment  
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One trial will convince you.

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SALT LAKE CITY

Something for the Home



**CORONA TYPEWRITERS**  
weight 6 pounds

Agents, A. B. Dick Mimeographs  
Addressing machines and all  
makes of typewriters.

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WHEN  
**A TRADE MARK**  
ON ANY PRODUCT

You are assured that it is almost invariably of  
superior quality and sold at relatively lower price  
than similar goods which are not advertised.

Let us consider for a moment any advertised  
article with which you are familiar.

The ordinary manufacturer starts out on  
small scale. His products are sold in small quantities.  
He learns from the people who purchase his product  
any fault they may find with them. He remedies  
this condition, then he will begin by advertising  
locally, and as his sales increase, he will advertise in  
the state or wholesale district.

Before he starts, however, on a very extensive



We are the  
people who  
make

**VITRIFIED**  
**CLAY**  
**DRAIN**  
**TILE**

for farm  
drainage.

That will not  
decompose with time alkalies or acids.  
**SALT LAKE CITY, UTAH.**

Approved Garments



**QUALITY GUARANTEED**

36 Main Street

**SALT LAKE CITY**

**"QUEEN'S TASTE"**

Macaroni, Spaghetti and All "Queen's  
Taste" Products Always Please

**WESTERN MACARONI**  
**MFG. COMPANY**  
Salt Lake City, Utah.

**METAL POLISH**



**AGENTS**  
**WRITE FOR**  
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**PROPOSITION**

Utah Steriline  
MADE IN UTAH Manufacturing Co.  
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NONE BETTER MADE



ASK YOUR DEALER



Write us Before Placing Your  
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**CRAGER WIRE and Iron WORKS,**

531 State St., Salt Lake City.





ASK YOUR GROCER  
FOR  
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AND  
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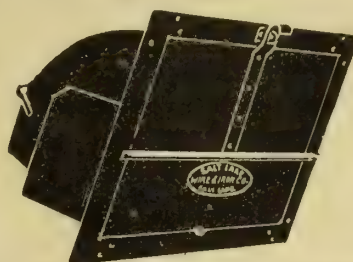


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Painting and Decorating  
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Artistic decorators of Homes,  
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corators of the Utah State Capital.  
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SALT LAKE WIRE & IRON WORKS  
Everything in Ornamental Iron and  
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Wrought Iron Coal Shutes a Specialty  
242 EDISON ST.

BUY THE  
"Utopia"  
and  
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Brands  
of  
Hams, Bacon and Lard,  
There is nothing better.

Ask your Grocer and Meat  
Market.

If you have live stock to  
sell communicate with us  
**UTAH PACKING  
and  
PROVISION CO.**

# SEE OR FIRM NAME OF MERCHANDISE

ampaign he is usually sure that the article he wants  
o advertise is as good as he can make it, then he puts  
is name, or trademark upon it, and goes out to in-  
crease his sales.

Trade marks and advertising are two of the  
most valuable public servants we have in business  
oday, their whole tendency is to raise the quality  
and standardize them and make the price as low as  
ossible in consideration of the quality of the product  
hat is offered for sale.

No matter what you pay, be sure and see that the  
manufacturer who made them "Signs" his products.  
You will know by this that he stands back of them,  
it is a guarantee to you.



ROYALLY MADE  
FOR A  
CRITICAL TRADE

## What Are Your Printing Needs

Every farmer should pay  
more attention to his needs in  
printing. Those not acquainted  
with him judge him by the  
printed matter he sends out.  
Neatly printed Letterheads,  
Envelopes, Butter Wrappers,  
Advertising Circulars, etc.,  
add greatly to his influence and  
prestige.

What Are Your Needs?  
We are equipped and pre-  
pared to furnish you with any-  
thing in that line at the lowest  
possible cost.  
Send us your next job, or  
get our estimates.

**LEHI SUN  
PUBLISHING CO.**  
Lehi Utah

WHEN IN SALT LAKE  
MEET YOUR FRIENDS  
AT



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**MAIL US  
YOUR FILMS  
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We Develop Any Size Roll 10¢  
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Larger Sizes At Equally Attractive Prices  
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INSIST ON  
AGNEWS  
QUALITY  
CHEESE  
in tinfoil packages  
10c  
"It Spreads"



Distributors of  
The Famous  
**BRASCOLITE**  
The Finest  
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OLDEST KNITTED GARMENT  
HOUSE IN UTAH. WHY?  
QUALITY AND WORKMANSHIP!



Write  
**SMITH & ADAMS**  
for

Tents, Awnings, Wagon and  
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purposes.

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**SALT LAKE CITY**

**MERRILL-KEYSER  
CO.**

Buyers and  
Wholesale Shippers  
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Ask for quotations.





## THE HOME

### CARE OF THE BABY.

#### Weight and Weighing the Baby.

The baby's weight is perhaps the best index the mother has of his condition. The average weights of babies of given ages are now pretty well-established, and a weight noticeably lower than the average indicates a lack of development due either to deficient diet, or to illness, while an excess of fat may point to improper feeding. If the baby's weight either remains stationary for any considerable time, or begins to fall off it is always a sign that something is wrong; and the mother should seek the help of a good doctor, without delay.

The average girl weighs 7 pounds at birth, while boys average half a pound heavier.

During the first four days the baby may lose from one or two ounces to a pound, while waiting for the mother's milk to be established, but as soon as he begins to nurse regularly he should quickly regain this loss. During the first month he should gain about three-quarters of an ounce each day; then up to the sixth month, from four to eight ounces a week, and from the sixth to the twelfth month two to four ounces a week.

At three months the average baby weighs from twelve to fourteen pounds; at six months, fifteen to sixteen pounds; at nine months, seventeen to eighteen pounds; and at one

year, twenty to twenty-two pounds. The baby thus usually doubles his weight at five or six months, and at the end of his first year weighs three times as much as at birth. Most babies do not gain quite steadily, week by week. During short periods, owing to excessive heat, when the food is reduced, a baby may show no gain, and may even fall off a little. This condition should be temporary and he ought to begin to gain as soon as the disturbance subsides.

Bottle-fed infants do not gain as rapidly during the first months as do breast-fed babies, but after the ninth month they are apt to gain more steadily because they do not lose weight as breast-fed babies usually do at the time of weaning.

A very fat baby is not to be desired. Although mothers are prone to believe that a fat baby is a healthy one, this is not necessarily true. An exclusive diet of certain of the proprietary infant foods, consisting largely of sugar or of starch, is very apt to produce excessive fat, and give a false impression of abounding health, since bones and muscles may thus be deprived of their proper nourishment. Overfat babies are very uncomfortable in the summer from prickly heat and other ills.

A healthy baby has a well-rounded body, without wads and cushions of fat, or pendulous cheeks and pudgy legs. He has springy muscles, and is alert, active and full of life and motion.

In order that the mother may be informed as to the baby's progress, he should be weighed at regular intervals throughout at least the first year. For the first week or longer, he should be weighed every day; during the first six months, once a week; and later once in two weeks.

Breast-fed babies may be weighed just before and just after a nursing to determine how much milk they are getting, and to find out whether or not they need supplementary feeding. They should be weighed in exactly the same clothing both times, and to determine the daily gain, at the same hour each day.

The best scales are ordinary platform balance scales such as are used in grocery stores. A special basket or pan which fits on the platform, and which will hold the baby comfortable is desirable. Spring scales are less accurate but are cheaper, and are better than no scales at all. Most country households have enough general use for a good scale, so that such a purchase will not be an extravagance. Many city mothers have the advantage of being able to go to an infant welfare station where the baby may be weighed as often as desirable. In these cases it is easy to keep a careful record of the baby's growth.

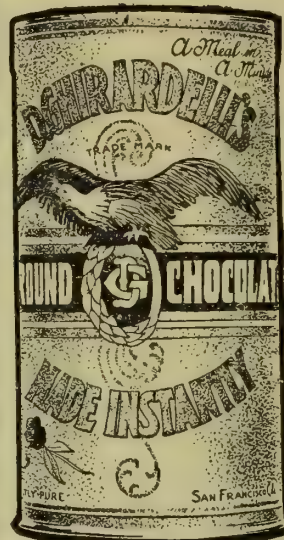
### SOME GOOD RECIPES.

#### Haricot Mutton Stew.

It is only when mutton is combined with beans that its is properly "haricot," this being the French word for beans. Buy one pound of neck of mutton, pare off most of the fat, and saute in the frying pan. In the meantime, pick over and wash and throw into a stewpan of boiling water

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Player-piano  
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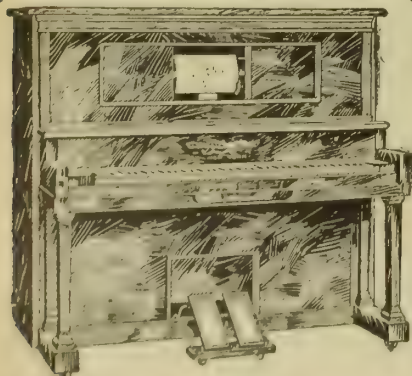
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freight prepaid to your railroad station; bench to match case, and 25 rolls of standard, up-to-the-minute music, all included in this price.

The instrument has seen slightly use but is every bit as good as BRAND-NEW, both from a standpoint of case, appearance and PERFECT condition of interior. Only ONE at this price.



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THREE TRAINS DAILY



PANAMA CALIFORNIA INTERNATIONAL  
EXPOSITION SAN DIEGO OPEN ALL YEAR



one cup of navy beans. Boil them ten minutes, drain and rinse and let cool or pour cold water over them. Put into the stewing kettle, one with a tight cover is best, the meat, the beans, two onions sliced, two carrots scraped and sliced, and six cups of cold water. Bring to a boil and skim, then cover and set over the simmering burner to cook for two hours. The beans should be beautifully soft in that time. Take off cover and as soon as the stew skins over remove this skin. Add salt to taste, probably about two-thirds of a teaspoon, and if you have six outside leaves from a head of lettuce, wash them, place one on top of the other and cut in shreds and add to the stew and cook five or even fifteen minutes. The lettuce will still be crisp to the taste and be an agreeable addition.

#### Mutton Stew with Dried Peas.

A stew made with dried green split peas, put directly in with the prepared meat after they are washed, is not quite so fine in appearance as the bean stew, but many will prefer the flavor and it will cook in one hour and a half instead of two hours. A little celery in either of these stews is a real addition, and white celery leaves may be cooked in at the last instead of lettuce. Use the same quantities as for the bean stew, one pound of neck of mutton, one cup of green split peas picked over and washed until the water is clear. Two good sized onions will not be noticed as onions when the whole is cooked. The meat may be taken up and the rest sieved and served around it, or the most liquid part may be used for soup and only the thick puree served with the meat. Six cups of water makes this stew a little thin, but this amount is fine for a soup.

#### Thick Pea Puree.

The recipe for pea puree given here

so many times is just the above minus the meat. In most cases four cups of water, one onion, and one carrot with one cup of peas is a good proportion for a puree that can be dried quickly over a hot fire with butter and used as a vegetable or thinned for soups. Any bean first boiled ten minutes and cooled may be cooked in the same way and the most ought not to take more than three hours to cook if gently simmered. They will never come truly soft if boiled hard.

#### Boiled Lentils.

Lentils may be cooked in exactly the same way as green split peas without soaking or scalding. They are good seasoned in the same way with the one onion and the one carrot to a cup. If any meat is used with them perhaps it would best be a little tried out salt pork. Cooked without any meat and well buttered when hot, they seem approximately like some unusual fresh vegetables. They have a strange herblike odor which if emphasized by wrong cooking may make them very unattractive. Vinegar helps to make the starchy part of them indigestible and is probably added largely because they may be so tasteless if wrongly cooked. They contain more protein than any of the other legumes, therefore they have been highly recommended as nourishing or as an equivalent of meat. No meat unless the leanest known has any such proportion of protein as dry lentils, and they are rich in starch besides.

#### EVERY GIRL SHOULD DEVELOP GOOD TASTE

Florence Hunt.

Individuality, simplicity, and quality of material are elements that must be considered by the girl who aspires to be well dressed.

Too much stress cannot be placed on the importance of developing good taste. Good taste includes knowledge of color, line, form, material, and suitability to the occasions upon which the dress is worn. Dresses for school, business, or street wear or for dress affairs should, of course, be distinctive.

Then the costume must be suited to the individual according to line and form. A tall person cannot wear the same style as the short person. The same principles apply also to materials used.

The study of color harmony is made practical by combining samples of materials and designing appropriate costumes. There are materials which will not combine well and colors that should not be used together.

Another problem is the study of the design principles—the relation of rhythm, balance, and harmony to dress. The greatest effort is made to impress upon girls studying costume designing in the college, the value of simplicity, good quality, and less decoration. The girls are given instruction in how to dress to suit their own eyes, hair, and complexion.

The good housewife saves the eggs and always uses off the top. When the farmer gets good and ready he takes the box to market and sells them for fresh ranch eggs and when they get to the consumer half the lot are stale and the reputation of ranch eggs is ruined. Farmers can not make the poultry business pay in that way. Let the farmer name his ranch



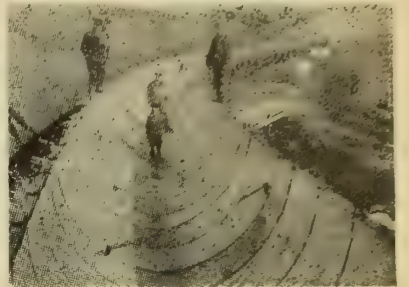
## HEWLETT'S LUNETA BAKING POWDER

25 CENTS the Pound, why pay more?

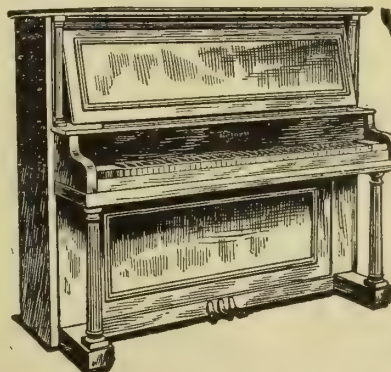
The best at any price, and the price is only twenty-five cents for a big pound tin. No other baking powder will raise nicer, lighter biscuits, cakes and pastry. None more pure, none more wholesome.

Order from YOUR Grocer.

If you are losing 60% of your water through SEEPAGE, which is the average loss in irrigation ditches, use our LENNON Smooth Flume for Ditch Lining. Instead of building dikes to carry water across your low places, use Flume. It will not leak and will pay for itself the first year, by the water it will save you. Made in all sizes. We sell everything for irrigation.



UTAH CORRUGATED CULVERT & FLUME CO.  
Woods Cross, Utah.



## SAVE One-Half On a Piano

## BUY A USED PIANO

We have a number of rebuilt and rented pianos and player-pianos which we are compelled to sell to make room for incoming stock. Some of these we have been forced to repossess, others are new pianos that have been returned from rent. Most of them have been in homes where they have had good care; several have been out less than a year! Some are half paid for already! We are going to give the benefit of what "the other fellow" has paid. Prices have been made that will move them all within a very short time.

Our list, with descriptions that would do these instruments justice, is too large to publish. If interested in saving one-half on a Piano or Player-Piano, fill out the enclosed coupon, and we will mail you a list with full description of these great bargains.

CONSOLIDATED MUSIC CO.,  
Salt Lake, Utah.  
Gentlemen:—Please mail me your list  
of rebuilt and rented  
Pianos                      Players  
I prefer.....case  
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This is the opportunity you have been waiting for.

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Why not today? The sooner you try this sugar the sooner you will recognize its superiority and economy. Utah-Idaho Sugar can't help but please you; it is pure, white, sweet and uniformly granulated. All who have given this sugar a trial, will accept no other.

We have enough confidence in your knowledge of sugar quality to ask you to pass judgment. We know your verdict will be favorable. A trial order will make you a steady user. Order a sack today. At all grocers.

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Established 1904

Entered as second-class matter in the postoffice at  
Lehi, Utah.

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#### OFFICES

All mail should be addressed to the Utah Farmer  
Lehi, Utah, Kirkham Building.  
Our office at Salt Lake City, Utah,  
is at 712 McIntyre Building.



New York Office 5th Ave. Bldg.  
S. E. LEITH, Mgr

Chicago Office Steger Bld.  
TOM D. COSTELLO, Mgr.

St. Louis Globe-Dem. Bldg.  
A. C. COUR, Mgr

Change in Address—When ordering a change in the  
address, subscribers should be sure to give their  
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address cannot be changed. This is a matter of im-  
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Advertising Rates—The advertising rates will be sent  
upon application.

#### OFFICIAL ORGAN

Utah Horticultural Society, Utah State Dairymen's  
Association, Utah State Bee Keepers' Association,  
Bear River Valley Farmers' Protective and Commercial  
Association, Agricultural College Extension Depart-  
ment and Utah State Fair Association, Utah-Idaho  
Millers' and Grain Dealers' Association, Utah Fruit  
Growers Association.

#### OUR GUARANTEE

We guarantee every subscriber against loss thru dis-  
honesty or attempted swindle by any advertiser in  
this publication. We do not attempt, however, to  
adjust trifling differences between the subscribers and  
honest, responsible advertisers, nor will we pay the  
debts of honest bankrupts. Notice of complaint  
must be sent us within thirty days from date of the  
transaction, and the subscriber must have mentioned  
Utah Farmer when writing the advertiser.

You expect to pay a fair price for seeds, and  
then you have a right to expect them to be clean,  
true to name, and gull of germinating power.  
Secure your seeds early.

Don't neglect to drag the roads in front of  
your farm. An hour or two's work at the proper  
time when the roads are drying will do much to-  
ward making a good road.

Many a man blames the Lord and climatic con-  
ditions for a poor farm crop, which was really  
the result of his own poor plowing and improper  
preparation of a seed bed.

We do not recommend that every farmer should  
waste time or money on flower novelties, but we  
do recommend that on each farm some of the  
standard and well known flowers should be  
produced for the pleasure and the beautifying of  
every farm home.

We have had many compliments for the fea-  
ture article on Rope Splicing that we gave to  
our readers last week; as one man said, "I don't  
believe that one man out of five knows how to  
tie correct knots." The lesson given in last  
week's issue should not only help the boys, but  
is practical, good information for any farmer if  
he does not know how to tie proper knots.  
The knowledge or the method of splicing rope  
is worth a great deal to anyone. The best way  
to put a rope on a halter is to splice it. If you

can mend a rope during haying season, it often  
means a saving of three or four hours of valu-  
able time.

#### SPRING DAYS.

These are the days that count very much in  
successful farming. A matter of a few days delay  
in getting onto the ground at the proper time  
means a great deal in the returns that will come  
to you at the end of the year. The making of  
a good seed bed is even more serious a pro-  
position than many farmers will admit, or even  
accept.

You must make a study of your land, and know  
just how to treat it. Farms separated only by  
the distance of a mile, must be worked different-  
ly, because the soils will be of a different texture  
and nature, and will need different treatment.

Every farmer must make a study of his own  
land, and know the right time to get on it, and  
not let anything prevent him from taking care of  
it at the right time.

#### PREPARE TO SPRAY

At this season of the year "Preparedness" is  
an appropriate word for many phases of farm  
work. Are you prepared to do your spraying?

Spraying is not only necessary for good fruit  
raising, but it is required by law, and every owner  
of an orchard should lay plans now to spray, and  
do it at the right season. We have been spray-  
ing for a number of years, and it should no longer  
be in the nature of experimental work. We  
ought to know how to get good results from  
spraying.

Put your spray pump in good condition. Secure  
your spraying material now, and be ready to make  
the application when the right time comes.

It may be advisable to join with your neighbor  
in buying a spraying outfit and material. These  
are the things for you to plan and work out right  
now.

#### EXTENSION WORK.

Every year sees a growth in the Extension  
Work that is being done by the Agricultural  
College and the Department of Agriculture. The  
past season has been no exception to this rule.  
Starting on November 17th, at Huntington, Utah,  
a great many Farmers' Meetings, Farmers' In-  
stitutes, and Round-Ups have been held, number-  
ing in all about four hundred. The last meetings  
for this season were held at Lehi during this  
week. The attendance at all these meetings has  
been very good—in round numbers, about 50,000  
people have attended.

As a result of these meetings, discussions, and  
exchange of experiences, a great deal of good  
ought to come to the farmers of the state. The  
meetings may not have been ideal in every in-  
stance, but the big majority of them have been  
successful, and the people taking part in this work  
are to be congratulated upon the success obtained  
during the past winter.

Plans are already being made for next year,  
and profiting by the experiences of the past,  
there will be a few changes worked out for the  
coming season.

#### WHAT ABOUT THE CHICKENS?

There seems to be an unusual demand for all  
kinds of poultry this year. There never was a  
better outlook for the poultrymen. What are  
we going to do about the thousands of dollars

#### DR. WIDTSOE'S WEEKLY MESSAGE.

##### LET THERE BE LIGHT

This day is as a page from a fairy book.  
The impossible has been made possible; the  
unreal has been made real; the dream has  
acquired substance, and our hearts beat quietly  
as new conquests over nature are announced.  
Into the hand of man has been given the full-  
ness of the earth.

From the tallow dip to the incandescent  
electric light is a leap, as from one world to  
another. By the power of water, steam or  
gasoline, a wheel is turned, and the inert  
metallic wire is made alive with a force that  
may be transmitted from place to place and  
converted at will into mechanical motion, heat  
or light. The transformation is beyond the  
understanding, nevertheless, it is under hu-  
man control and has been made the servant  
of man. Life has become more joyous and  
more efficient because of the general possession  
of the electric light.

In Utah where the village system prevails,  
and water power is abundant, the electric cur-  
rent is very generally available. Cities and  
villages not yet supplied with electric lights,  
should make earnest attempts to secure it at  
once, for it is one of the great products of  
civilization in which all men should share,  
and which help to level the differences be-  
tween the big city and the little town. The  
drift to the cities has most usually been due  
to the absence of modern conveniences from  
the farm.

Even the isolated farm may now share in  
the comfort of the electric light. A small  
generating unit is on the market which can  
be run with the ordinary small farm gasoline  
engine. By running the plant for a few  
hours, enough energy is supplied to the  
storage batteries to light a large farm and  
the necessary outbuildings for a week, and at  
a very low cost. By the use of the storage  
batteries, the engine is left free practically  
all of the time for the ordinary use of the  
farm. The whole outfit is so inexpensive  
that it seems unnecessary for any farm  
house in the State to use the antiquated,  
cumbersome dangerous and more or less un-  
pleasant systems of lighting that depend on  
the burning of some combustible material.

If farm life is to compete successfully with  
city life, the comforts of the modern day must  
be found on the farm. The work of the farm  
is more attractive than that of most other  
pursuits; but, the surrounding comforts must  
also be equal or the city will win. The de-  
velopment of the farm electric lighting system  
will help solve the rural problems.

worth of poultry that is shipped into Utah each  
year? Are we going to continue feeding the  
people on Eastern Cold Storage Eggs and Poul-  
try; or shall we produce for them home grown  
poultry and fresh laid eggs?

Everything in this state is favorable, for poul-  
try the production of foods and the natural con-  
ditions. Not only chickens, but ducks, turkeys,  
and geese; and yet, with all of these favorable  
conditions, we buy thousands of dollars' worth  
outside of the state every year. Let us make  
a change and produce more poultry. There is  
always a good market for poultry products.



# Protect Your Harness With This Oil



You'll save money by oiling your harness now. Quality being equal, perhaps a dollar or two would influence your selection of a harness. But several times this amount is lost by owners who do not properly care for their harnesses.

## DUCK-BACK Harness Oil

There are thousands of little pores in leather, which should be kept filled with natural oil. If they are not closed with oil, the harness is exposed to sweat, dust, moisture and heat and soon loses its pliability and strength.

Duck-Back Harness Oil is a scientific preparation for preserving harnesses.

**Utah Oil Refining Co.**  
Refiners  
Salt Lake City, Utah.

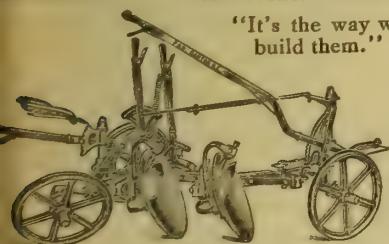


No. 4 1/2

## Disc Gang Plow

Built along simple lines, light in draft, efficient and durable. Made in 2 or 3 furrows, with 26 in. discs, though 24 in. discs will be furnished if preferred. The 2 furrow plow can be equipped with a Third Disc Attachment, or the 3 can be quickly converted to a 2. 4 horse eveners included.

"It's the way we build them."



Levers give easy control of plow from seat, and operator is assisted in handling them by strong balance springs. Strong heavy beams, rigidly braced, withstand the strain to which a disc plow is subjected. Hand control. Hitch is adjustable for tandem or abreast eveners. Discs are set in chilled bearings supplied with hard oil by compression release cups. Discs can be set to cut 10 or 11 inch furrows. Angle of discs can be changed to meet varying conditions of plowing, an especially desirable feature in very hard or gumbo land. Extra adjustment for clearance in trashy ground.

Scrapers are large, of an improved pattern, and assist in throwing the soil over; they conform to the concavity of the discs, and are provided with ball and socket joint for close adjustment. Wheels are cast in one piece, and equipped with removable proof boxes with hard oil screw caps. Linch pins and collars, in addition to perfect sand bands, hold wheels in place. Loose bands behind discs prevent trash from winding around disc boxes.

Ask Your Dealer or Write to Nearest P & O House

**Parlin & Orendorff Co.,**  
Canton, Illinois  
**UTAH IMPLEMENT VEHICLE CO.**  
Sales Agents  
Salt Lake City, Utah.

### RUST WORSE THAN WEAR

William H. Sanders.

Proper Protection Is Matter of Business as Much as Caring for Horses and Cattle.

More machinery rusts away than wears out on the average farm. Shelter for machinery is not given due consideration.

If properly sheltered, the uncomplaining farm machine will more than repay its owner for his extra care and if you want to be classed with the thrifty, farsighted farmers who are realizing the greatest returns from their labor, protect your machinery.

It is a matter of business and economy to protect your machinery from the weather as you protect your horses and cattle. Machinery, like animals, cannot live long if forced to withstand the ravages of heat, cold, wind and rain. If you house your windmill pump, it is not nearly so liable to freeze up and burst in the winter and if anything should happen to it in zero weather, you will find it a much more comfortable job to make the necessary repairs in a house than out in the cold. Furthermore, such an engine will last twice as long when under cover and free from the corruption of rust and the wearing influence of dust.

#### Woodwork is More Susceptible

Woodwork suffers more from exposure than does iron, because wood will dry rot under the paint, starting at a place where the paint has been scratched off. While there may be no external evidence of weakness, yet, when time is most valuable, failure of the rotting part will often cause the farmer to suffer costly delays and equally costly repair bills.

"If your machinery is under shelter there is always an incentive to overhaul it and keep it in good shape at odd times, whereas a machine left out in the fence corner to be covered with snow probably gets little attention.

It is desirable to have a large enough shed for housing machinery so that there is some open space under cover where a machine may be overhauled. If it is not possible to have housing facilities of this character, it may be advisable to dismount or take apart some of the bulkier machines that they may be stored in the small space available.

After repairs have been made, the judicious application of good paint on well cleaned surfaces will put machinery and tools into practically as good condition as they were when new. But the paint must be made of the best pigments and genuine linseed oil, and the surfaces should be well cleaned, for it is well to remember that paint will not adhere to rusty iron or greasy or oily materials of any kind."

#### WOMAN'S WAY

Mrs. Crawford—Why don't you ask your husband's advice?

Mrs. Crabshaw—I intend to, my dear, just as soon as I've made up my mind what I'll do. —Judge.

Tack five minutes to the work of your day and go over the calves with comb and brush. It will be the best investment of time you can make.—Farm Journal.

Be on hand when any meeting is held for the betterment of farming conditions. Take a prominent part in everything that tends to make the world better.—Farm Journal.

### FAKES LIKE THE POOR

ARE ALWAYS WITH US.

(Continued from page 5)

ments on the labels and in advertisements, circulars and printed matter to the truth; they cannot at least be classed as liars. There is, however, in ninety per cent of the advertising claims made for these patent medicines, only one fault, and that is that they are deliberate, deceitful and in many cases vicious lies, and the fault with the so-called remedy in many cases, is that they are worthless or harmful, and if a worthless remedy is placed upon the market, the lie must be resorted to in order to accomplish its sale.

Too frequently is seen in newspaper columns statements advocating the virtues (?) of patent or secret medicines which the manufacturer or vendor dare not publish on the label because such claims are offensive to the law, and if the truth is told on the labels because a law compels it and the lie is used in advertising because the law cannot reach it, the manufacturer, vendor or advertiser are not only liars but are cowardly in their practices.

Spoiled beef is just about as wholesome and palatable as stale eggs.

#### LOST

between Lehi and American Fork a bunch of pedigree papers for a black horse. Finder please return to the Darling Hotel, Lehi, and receive a reward.

A. J. DODSON

### Caught 51 Rats One Week

Trap resets itself .22 inches high, will last for years, can't get out of order, weighs seven pounds, 12 rats caught one day. Cheese is used, doing away with poisons. This trap does its work, never fails, and is always ready for the next rat. When rats and mice pass device, they die. Rats are disease carriers and cause fires. Rat Catcher sent prepaid on receipt of \$3. Mouse Catcher, 10-inches high, \$1. Money back if not satisfied.

One of these rat catchers should be in every school building.

#### H. D. SWARTS

Inventor and Manufacturer  
UNIVERSAL RAT and MOUSE TRAP  
Box 566, SCRANTON, PA.



### CALKO DIP

An insecticide and disinfectant for Cattle, Sheep, Hogs, Horses and Poultry  
45c qt., 75c half gal., \$1.25 gal., delivered.

#### CALKO

Stock Conditioner  
Keeps stock healthy and thriving.

CALKO HEALING POWDER heals saddle and collar galls, barb wire cuts, etc. Keeps flies flying.

Send in your order.

**CALLISTER-KORTH CO.**

McIntyre Bldg., Salt Lake City, Utah

### RELIABLE FARM BARGAINS.

50 acres of good land near Brigham City. Extra good beet land and close to new sugar factory. 4 room house and good outbuildings. Ample tree water. This place can be had on good terms at only \$200 per acre.

300 acres of good land with ample water, located in southern Idaho on the main county road and near railroad station. Owner will divide to suit purchaser into either 40, 80 or 160-acre tracts. Only \$30 per acre, on good terms. This is a mighty good farm bargain.

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40 acres in the Bear River valley, with full water right in the Bear River canal. Land is leveled, plowed and in first class condition to raise a big crop this year. Only \$115 per acre, with ten years to pay.

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## POULTRY

### FEEDS FOR POULTRY.

Use Simple Mixtures and Home-Grown Grains—Conditions Govern Selection of Best Ration.

Though the feeding of poultry is a much debated subject in poultry husbandry, there is no one best feed or combination of feeds. Results depend almost as much upon the ability of the feeder and the methods of feeding as on the kinds of grains.

The simplest feed-mixtures and home-grown grains should usually be selected, the rations varying with changes in the market price of the grains. It is advisable for most poultry raisers to mix their own feeds, as in this way they can control the proportion of the various ingredients and obtain the precise mixture that they desire. If, however, one desires to purchase prepared feeds, information concerning the different commercial articles may usually be secured from the State experiment station. Most experiment stations will analyze poultry feeds and report on the different commercial preparations sold by dealers in their States.

Poultry feeds may be divided for convenience into five general classes: First, grains, both whole and cracked; second, ground grains, fed in the form of a mash; third, meat feeds; fourth, mineral feeds; and fifth, green feeds. Corn, cracked corn, wheat and wheat screenings, oats, barley, rye, and buckwheat are the principal grains, while of the ground feeds we have corn meal and corn chop, corn and cob meal, wheat bran, middlings, shorts and low-grade flour, oatmeal, oat flour and ground or crushed oats, and mixed feeds. In the meat feeds, or feeds supplying animal protein, are beef scrap, meat meal, ground green bone, and various forms of milk; while bone meal, dry bone, oyster shells, and grit make up the mineral feeds and, with charcoal and green feeds, complete the common feeding materials.

Many ground feeds, which are by-products of the common grains, are used to good advantage in feeding, in combination with grain and beef scrap. Ground grains and meat feeds are more forcing than the whole grains commonly used, while the combination of the whole grains with the ground feeds make a more economical feed and a better balanced ration than the whole grains alone. The feed elements are usually cheaper

in the ground than in the whole grains, as the former are by-products of many of the grains used for human consumption. Ground grains and beef scrap, in combination, either wet or dry, make what is called a "mash." These by-products are higher in protein than most of the common grains, so that a balanced ration is secured by combining whole grains with the mash. Some of the ground grains, such as bran and middlings, add a large percentage of bulk to the ration, which is beneficial.

Animal protein is considered essential to the best results in feeding. Most poultrymen feed meat in some form, while suburban poultry keepers either feed this product or table scraps; but few farmers buy any meat feed. Some form of feed containing animal protein must be supplied if any eggs are to be obtained in the fall and winter. Skim milk or buttermilk is available on many farms and where it is not it would probably pay most farmers to buy beef scrap or some other meat feed. Fowls on free range on the farms pick up bugs and insects during part of the year, which furnish this protein feed, so that the use of additional meat feeds is regulated by individual conditions. Fowls closely confined need more animal feed than those on a good range; and in a cold climate, where no bugs or insects are available during several winter months, more animal feed must be supplied than in sections where the winters are mild.

A well-balanced ration contains the proper proportion of protein and carbohydrates for its purpose with the mineral matter, bulk, and palatability that are necessary to give good feeding results. There is no best ration, and the practical application of science in poultry feeding is to know about what proportion of these substances gives good feeding results and then to use roughly this relative proportion in making rations or in substituting different feeds, according to their price and availability.

In securing fall and winter eggs the first essential is to have pullets well matured before cold weather, which means hatching birds of the general-purpose breeds in March and April. The average farmer hatches his chickens too late to secure eggs in the fall. With well-matured pullets and improved feeding methods farmers could secure more eggs in winter than they obtain under present conditions.

A well-balanced simple ration may be made of equal parts, by weight, of wheat, cracked corn, and oats fed twice daily, usually in the morning and at night. The grain may be either scattered on the range in summer and in the litter in the poultry house in winter, or fed in the house throughout the year. It should be supplemented with a wet or dry mash of 2 parts of corn meal and 1 part each of wheat bran, middlings, and beef scrap. One feed of mash may be fed at any time during the day and the grain fed for the other two meals. Regulate the proportions of grain and mash so that the hen will consume about equal parts of each. About 1 quart of grain daily should be fed to every 16 Leghorn hens, or



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to 13 general-purpose hens, such as the Plymouth Rocks, with an equal weight of mash. This amount, however, varies, and should be regulated by the feeder, as the hens should be eager for each meal. Leghorns will eat about 55 pounds of grain and mash in a year, and Plymouth Rocks, or hens of the general-purpose class, about 75 pounds.

### POULTRY NOTES

J. O. Lofgreen.

Profit by the experience of others. Those who have made a success of poultry raising have as a rule:

Only one uniform breed of chickens.

Market their own uniform colored eggs which are always infertile for marketing.

They sell the best mating for hatchlings at a high price when the market is lowest.

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Their birds are well fed with a clean variety of feed and fed right on the minute as regularly as the school boy gets his dinner, not over fed and then starved.

Water is running by or they are given thrice a day etc.

Keep fresh, clean water in reach of your hens also lime, gravel and charcoal.

One who purposely sells infertile eggs for hatching is nearly as bad as one who sells fertile eggs for other people to eat. He knows that broody hens, warm weather and warm rooms will develop the chick and that the

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consumer must have a cast iron stomach to relish his eggs. Both should be dealt with for fraudulent use of the males (not mails).

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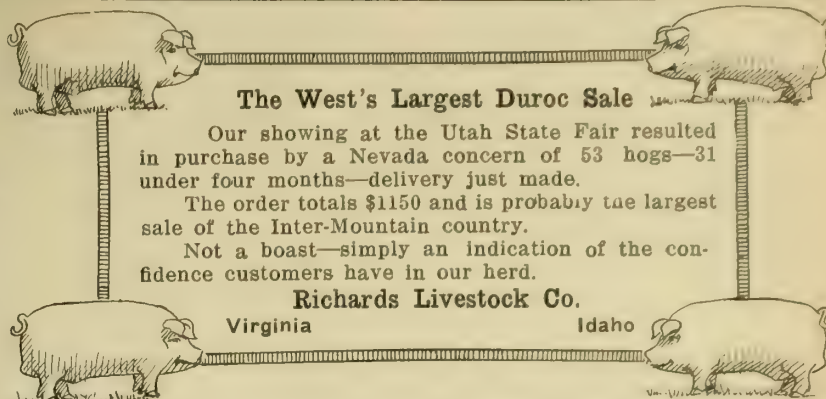
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Devoted to Agriculture in the Rocky Mountain Region

OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE

VOLUME XII; No. 33 LEHI AND SALT LAKE CITY, UTAH MARCH 18, 1916

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THE Weekly Message, written by Dr. John A. Widtsoe, appearing in each issue of the Utah Farmer, is one of the many good things we are giving our readers. Dr. Widtsoe has made a careful study of our agricultural conditions. He knows our many farming problems and we are sure our subscribers will be pleased to learn that he will write a weekly message to the readers of the Utah Farmer.

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VOLUME XII.

LEHI, UTAH, SATURDAY, MARCH 18, 1916

No. 33

## Plight of the Elberta Peach Grower

By Dr. A. G. Stoddard, Spanish Fork, Utah.

We need not discuss the present plight of the Elberta Peach Grower in Utah. That would be thrashing out old straw, and would be to no purpose except to furnish unpleasant reading to all of us who are financially interested. Whatever I shall say here will have reference to the Elberta Peach industry only.

The belief is general throughout the State that this will never bring a profitable return for the capital invested. I am not prepared to dispute that, as a general proposition, but I am not yet willing to accept it as a final and definite solution of my own personal problem. I grant you that the situation is bad enough which ever way you look at it, but for us to say, as I have heard frequently of late, that the Orchard Boomer, or Promoter, the strictly "Hot air" man has boomed the industry off its legs, would be putting too much stress upon one phase of the matter, and ignoring others quite as important.

For one thing, we must remember that Horticulture, in many of its branches, is backed up by certain climatic conditions that make it very enticing to a great many people.

And it is small wonder that our enthusiasm as Orchardists blinded our judgment as Business Men to a certain extent. And the more so because the transformation from what I might call Normal to Abnormal, from a fair balance between Production and Consumption to a condition of Over-Production, was taking place mostly at a distance and so gradually that the facts regarding it were not brought home to us until much of the damage was already done.

We were hugging the Delusion that those people Over Yonder would continue to want our stuff at good prices to the end of the Chapter. And when we found that they did not want it at Any Price the disillusionment came to us in the nature of a Shock, leaving us Wiser (perhaps) but poorer in Purse.

Now, I am not blaming anybody for this. If I were disposed to hunt for a Scapegoat, I might, perhaps with some show of reason, repeat the question asked me by a much discouraged peach grower in my home town a short time ago, "Why did not those men who were hired by this State do our thinking for us, men whose very position should have given them the broader view, the

large, far-sighted grasp of the whole situation, why did not some of these men read the handwriting on the wall, and raise a warning finger long ago?"

But this would be begging the question after all, and the answer

The hotbed is a valuable asset to vegetable gardening operations. The commercial gardener or truck gardener, as commonly called, finds it a necessary part of his equipment. He starts his cabbage, cauliflower, and other plants very early in the spring, transplanting them to his garden when the soil is in condition and the weather safe from frosts.

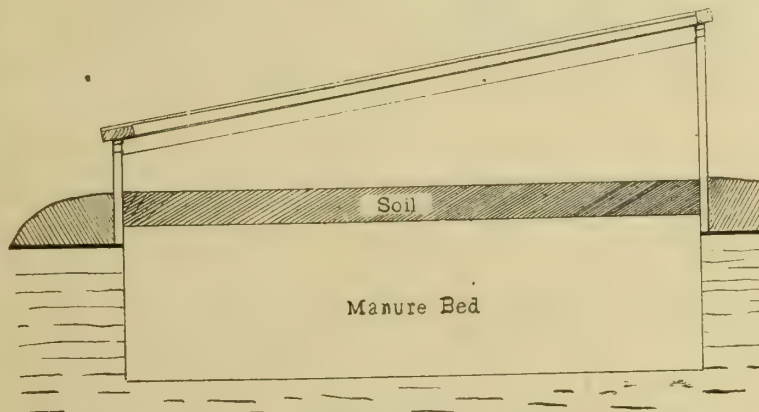


Fig. 1. Cross section of hotbed.

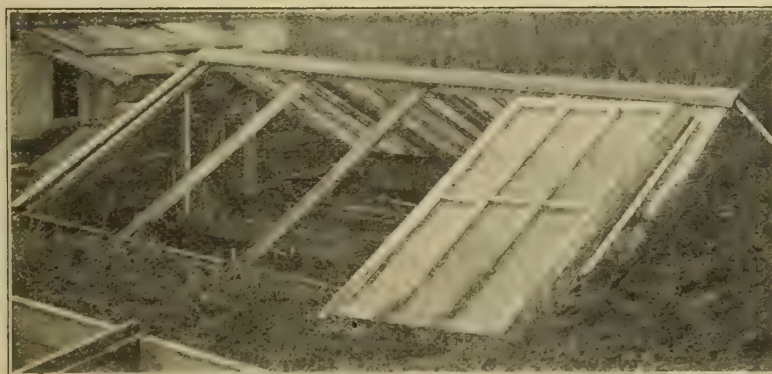


Fig. 2. Hothouse bed.

would be profitless at this stage of the game. And so, the old question "What are We Going to DO about It" is still clamoring for an answer, quite as insistently as it did four years ago, and I am perhaps not quite so Optimistic, not quite so "COCK-SURE" about the answer as I was at that time.

The answers to that question will probably be as various as the colors of the Solar Spectrum, and out of them all, it seems to me, some Constructive Program ought to be worked out.

The Gradual Substitution Plan, as recommended by the Shippers' Com- (Continued on page 25)

## Hotbed Construction

By C. B. Sprague.

to utilize more heat from the sun's rays by admitting more light. Fire hotbeds are heated by burning wood or coal in a furnace. The heat is conducted through tubes laid underneath the seed bed. Commercial hotbeds are often heated by steam or hot water piped around the bed in much the same manner as in a greenhouse. A hotbed house illustrated in figure 2 is heated by fermenting manure the same as a hotbed. It is seldom more than ten feet wide. The open space for a walk between the beds is about two feet wide and the beds on each side about four feet wide. The house may be covered with glass-filled sash or heavy muslin cloth. The glass is more expensive, but affords the best protection and admits the most light to the plants. The advantage of a hotbed house over a hotbed is the convenience of caring for the young plants during stormy weather. Both gardener and plants are under the same roof. The cost of a hotbed house is greater than a hotbed and requires more manure for the heating.

The preparation for the building of a hotbed requires some time. In making a hotbed for the first time considerable time is needed and the work should be begun in the winter months when other work is not crowding. Such items as the location, procuring of sash and glass, making the frame, and digging the pit, all enter into a make up, and take time.

### Location

In choosing a location, select a well drained spot with a southern exposure, preferably on the south side of a building, a fence, row of trees, or bank of earth. If located by the side of a building attention should be given to its position and not get under the drip from the eaves. If the bed is to be built longer than wide, the long way should always be placed east and west. The all important point in locating is to give the sash a southern exposure so as to get as much of the sun's direct rays as possible. The heat from the sun through the glass helps materially in keeping up the temperature.

### Construction

#### Sash

The construction can best be begun with less liability of mistakes if the sash is secured first. For the ordinary farm garden four or five sashes are required. The sashes are three feet by six feet outside dimensions, with three runs of glass ten inches wide.

(Continued on page 4)



# Hotbed Construction

(Continued from page 3)

They can be purchased from almost any seed house or planing mill, either glazed or unglazed. The glazed sash, or sash with glass already placed in it, costs about \$3.25 per sash. The unglazed sash costs about \$2.25 per sash and the glass or filling it costs \$3.60 to \$4.00 per box. A box of glass contains fifty square feet. The cost is practically the same in both cases.

## Frame

The frame is usually built of lumber. Brick cement are sometimes used and serves the purpose very nicely. They

should be the same thickness throughout the bed and the seed bed must be level for watering.

The frame can then be put over it, fitted in properly and the loose dirt that was thrown out banked up at the outside of the walls to a depth of from six to ten inches. This gives protection from the winds and closes any holes between the surface of the ground and the bottom of the frame through which any neat might escape.

The hotbed thus far completed, may have the sash placed over it and left

few days it will heat again and when thoroughly warmed is ready to place in the pit.

## Placement of Manure in the Pit

The placing of the hot manure in the pit calls for some little care. It should be shaken out, well broken up, and spread evenly throughout the bed. A depth of eighteen inches is commonly recommended for ordinary purposes. This brings the manure up two inches above the bottom of the frame, when the pit is dug to a depth of sixteen inches. If a bed is made early in the winter, or is to be used to grow a crop to maturity, it should contain twenty-four inches of manure. The manure should be put in in six-inch layers. Each layer should be well tramped to prevent uneven settling. Especial attention should be given to keep the manure bed level and well fined in the center, as it settles there most.

The sash can now be put on the frame and allowed to stand until the manure heats up thoroughly all over the bed. If it does not start to heat, sprinkle five or six buckets of warm water over the surface, and it will soon begin. Water of about one hundred degrees Fahrenheit is best. Extreme watering or the use of very cold water at the time of putting the manure in, prevents proper heating.

## Placing of Soil in Bed

When the manure bed appears well warmed through, level off the top with a garden rake. Cover with a good, rich loam soil four to six inches deep. Four inches is enough for the growing of cabbage and cauliflower plants for transplanting later. In growing early plants for table use, such as radishes, lettuce and spinach, which require a longer time for growing, six inches of soil is better.

## Planting Seeds

After the soil is put on, the bed must be covered over with the sash again and left until it is well warmed

and rake lightly over the surface to kill the weeds. The planting can then be done in a clean soil.

## Ventilation

Ventilation is a very important part in the successful operation of a hotbed. The general tendency is towards too little rather than too much ventilation. Growing plants, especially lettuce, requires a great amount of fresh air. The sash should be raised one to four inches daily at the high or back side of the bed, for an hour during the warmest part of the day. In very cold weather raising the sash and quickly lowering it again will suffice for a change of air. "Sweating," or a condensation of moisture on the under side of the glass is a sure indication that fresh air is needed and ventilation should be given immediately. During warm sunny days the entire covering may be lifted from the bed. As the season advances the plants should be exposed more and more to the open air. This will harden the plants and make them better able to endure the outside weather conditions when transplanted to the garden.

## Watering

Plants that are growing rapidly need an abundance of water. The heat from the manure below the thin layer of soil also helps to dry them out. Water any time that the plants need it and water well. Do not merely wet the surface, but apply water until the soil is wet as far down as the roots of the plants extend. Water at a temperature of about 65 degrees Fahrenheit is best. It does not chill the plants as would cold water.

## Cold Frames

Cold frames are constructed very similar to manure hotbed frames, except that the frame is placed directly upon the ground instead of over a pit. No manure is needed for heating purposes in a cold frame. They may be covered with sash or cotton cloth. The

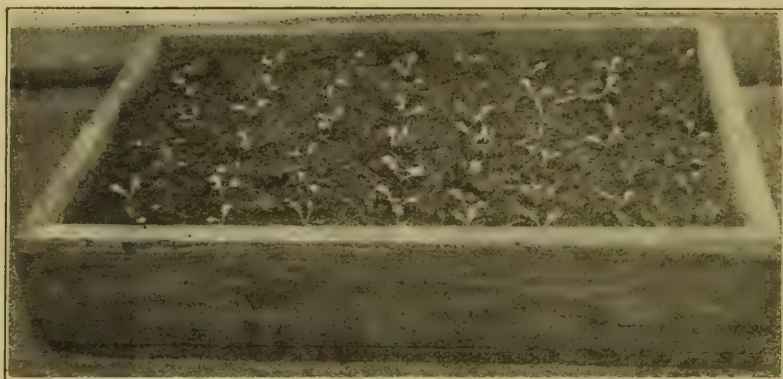


Fig. 3. Flat of lettuce plants.

make a very durable wall, that will last for a long time, but the cost hardly warrants their use. Any available old boards may be used in its construction. It is advisable, however, to use durable material at least one inch thick and so shaped as to make the walls air tight. The north wall of the frames should be 24 inches high, and the south wall 12 inches high, giving the sash, when placed upon the frame, a 12 inch slope toward the south. The ends of the frame are securely built and cut so as to fit close up along the sash. Fasten cross pieces of two-inch by four-inch material to the north and south walls of the frame, placing these about three feet apart or so as to close the openings between the sashes. These prevent loss of heat, give support to the sashes and keep the frame from springing out of shape.

The four corner posts, on the inside of the frame, are usually made of two-inch by four inch material. They should extend two feet below the bottom of the frame and rest on the bottom of the pit. This keeps the frame from settling in case the walls of the pit cave in or slide off, which are likely to do. In cases where room is an item and the ornamentation of a hotbed is not desired at all times, it is a good plan to put the corners of the frame together with screws. The frame can then be easily taken apart and stored away in small space until needed gain.

## Pit

The pit is made by an excavation the size of the frame, the depth depending on the thickness of the manure bed used. For manure eighteen inches thick, dig pit sixteen inches deep; twenty-four inches thick, dig pit twenty-two inches deep. If the hotbed is to be located on a southern slope, the bottom of the pit must be made level, by digging deeper on the upper side. It is important that the bottom of the pit be level. The manure

until planting time. This keeps the ground inside from freezing or the rains from heating in.

## Preparation of Manure

The preparation of the manure for the hotbed must begin about two or three weeks before planting time. The material generally used is fresh horse manure. Sheep manure may serve the purpose, but is not generally recommended. Cow manure does not furnish enough heat. Poultry and hog manures heat too rapidly and are soon exhausted.

Clear horse manure heats too violently. It should be mixed with about its own bulk of litter or bedding from the stalls. Manure from horses heavily fed with grains, should contain more litter than that from animals fed less grain and more hay.

## Care of Manure.

The care of the manure from the time of collecting until time to put into the bed is a very simple matter, but at the same time must not be neglected even for a short while. Manure should never be taken from a pile exposed to the weather or after heating has started. It should be selected, kept by itself in a separate pile, and protected from the rains until hauled to the place where it is to be used. It should be thrown in a compact pile, not over four feet in depth and about three or four feet from the edge of the bed where it is to be used. If moist, it will heat, no matter how cold the weather. A few buckets of hot water poured into the center of the pile will readily start it heating, if it is inclined to be a little slow. When it is nicely started to heating fork over into another pile. The outside and coldest manure should be put into the middle of the new pile. If it seems dry or has any spots that show signs of burning, shake these out well and sprinkle with warm water. The manure should be well moistened throughout the pile, but not so as to become soggy. In a

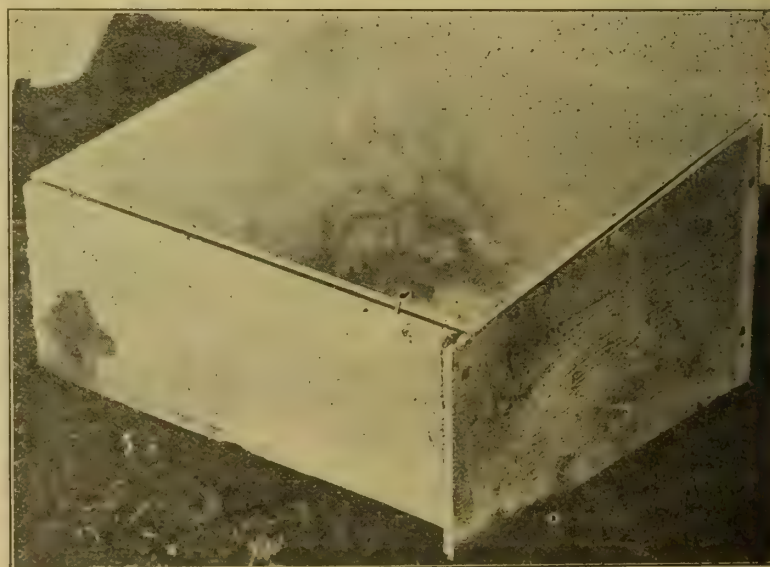


Fig. 4. Hill box covering tomato plant.

through. Do not plant seeds at this time. In a few days, generally four or five, the temperature will have reached between 130 and 150 degrees Fahrenheit. Then it will begin to cool and when it has dropped to 85 or 90 degrees, the seed can be planted.

If the soil used is known to contain weed seeds, it is well to wait a few days before planting. They will soon germinate. Remove the sash

general use of a cold frame is for hardening of plants after being taken from the hotbed. The plants are transplanted from the hotbed to shallow boxes commonly called flats, illustrated in figure 3. There the plants are cared for much the same as in a hotbed until all danger of frost is past, when they are again transplanted to the garden.

Hill boxes or frames are sometimes used in growing crops like early



melons. A small box about ten by twelve inches and four to six inches high on the low side is covered with a pane of glass and set over each hill. These are used over both planted and transplanted hills.

In some sections of the state the transplanted tomato plants seems to suffer more from attacks of tomato blight than those grown from seed planted in the permanent place in the garden. Tomato and melon plants can be grown in home-made paper pots in the hotbed and transferred from these to the garden without breaking the roots. Plants grown in pots and transplanted are earlier in fruiting and are not attacked by blight as much as those transplanted by the ordinary process.



Fig. 5. Pots made of newspaper.

The pots can be made of two strips of newspaper about six inches wide and eighteen inches long with a strip of parafined paper between. The parafined paper used in grocery stores to wrap butter is satisfactory. The paper is rolled into a three or four inch roll and fastened with a pin. The bottom is folded in as shown in figure 5. These are then set in the hotbed and filled with soil and the seeds planted direct in the pot. Old tin cans are sometimes used for this purpose to good advantage.

#### THE FARM OF THE FUTURE.

By F. B. Linfield, Director, Montana Agricultural Experiment Station.

During the past 10 years extensive studies have been undertaken of the factors that enter into success in its farm, using the word success in its business sense. From these studies have been fairly completely determined the important factors contributing to success on the farm.

These factors are:

1. Size of the business.
2. Diversity of the business.
3. The standard of production of field crops and animals.
4. The full utilization of all the by-products of the farm.
5. The proper balance or organization of the farm business.

The size of the farm business may be determined by the area of the farm or by the character of the crops grown and the intensiveness of the farming.

The diversity of the farm business refers to the variety of market crops produced. The safest and usually the

most profitable farm is the one that has three or more sources of income.

While large crops are not necessarily the most profitable, because they may cost more than they are worth, yet good crop yields are necessary to successful farming. High-class stock, especially large producing cows and poultry, are also very necessary.

The profits of the farm business are decidedly helped by letting nothing go to waste. There are many by-products of the farm, which a little planning will turn into valuable cash returns.

Farming is a business and, thus, thought should be given to its proper organization; the planning of the equipment, power, and help, so as to be able to use these to their highest efficiency. Moreover, the time is past when a farmer can afford to work as an individual unit. He must correlate his work and production, as well as his marketing, with his neighbors, if he is receive proper reward for his labor and investment.

The census reports of the United States present some interesting data on the effect of economic and other forces on the size of farms. For the Northern and Western States these records show a gradual increase in the number of small farms of 40 acres and less, a decrease in the number of 50 to 100 acre farms, but an increase in the farms of from 100 to 400 acres.

In Utah County, Utah, the average irrigated farm in 1909 was 43 acres. This is a highly developed farm district that has been settled for over 50 years. Study further shows that these small farms are intensively cultivated; the important crops are sugar beets, fruit, dairy and hog products.

In Montana the man on the small farm will have to work along similar lines. Sugar beets, dairying, hogs, poultry products, truck crops, and fruit crops of such varieties as are adapted to the district must be the products of the small farm. If the farmer can not content himself with these, the small farm is not the place for him. It will not prove profitable as a grain and hay or general livestock farm, even under irrigation. For such types of farming the most profitable farm unit will range from two to three hundred acres of land.

While co-operation is of very great importance to every farmer in the country, it is of special importance to the small farmer. Quantity of product of uniform grade and quality is of importance in successful marketing. For very many farm products the carload is the unit of shipment, if the best price is to be obtained.

In breeding cows, or pigs, or chickens, it will be very much better for the community to adopt one breed or type of each and stick to it.

In feeding hogs for shipment to market, neighbors should plan to have at least a carload ready at one time so as to be able to ship to advantage. In taking milk or eggs to market one person can generally take the products of a half dozen or more neighbors. Even in harvesting and running of harvesting machinery there will be much economy in two or three farmers working together. The 40-acre farm is a two-horse farm, and the size of the machinery must be selected on this basis.

With a combination of sugar beets, dairy cows, hogs, and poultry at least

half of the small farm should be cropped to alfalfa and pasture, so the area to grain would be small. It would probably pay this farmer better to buy the grain he needs than to grow it, thus giving the maximum area of the land to high-priced products. This, too, would reduce the need for machinery, as it would be preferable to hire the seeding and cutting of 5 or 10 acres of grain rather than to purchase the machinery needed to cut it. Other arrangements must also be considered to bring the returns of the small farm up to its possibilities. The farmer who is not willing to adopt this system of farming can not hope for a large measure of success.

In many districts there is a large place for such farms, but economic forces will put them out of business except in localities favorable to intensive farming and where the farmers of the district take advantage of all these factors that make for the most economic production and marketing of their products.

#### HONEST CONFESSION

Majorie—Everybody seems to notice whether you go to church.

Madge—Yes, dear; that's the only reason I go. —Judge.

The present high price of veal makes the temptation to sell the heifer calves very strong. Don't do it.—Exchange.

## Sheep or Cattle Ranch

720 ACRES NEAR VERNAL ONLY \$15,500

well fenced and with best water right in county. 2 good houses and 3 cabins, splendidly equipped.

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Get into this new county while lands are cheap, before the railroad.

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Live planters here in the Mountain States are devoting larger acreages every year to this profitable crop.

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Our office at Salt Lake City, Utah,  
is at 417 McIntyre Building.



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#### OFFICIAL ORGAN

Utah Horticultural Society, Utah State Dairymen's Association, Utah State Bee Keepers' Association, Bear River Valley Farmers' Protective and Commercial Association, Agricultural College Extension Department and Utah State Fair Association, Utah-Idaho Millers' and Grain Dealers' Association, Utah Fruit Growers Association.

#### OUR GUARANTEE

We guarantee every subscriber against loss thru dishonesty or attempted swindle by any advertiser in this publication. We do not attempt, however, to adjust trifling differences between the subscribers and honest responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within thirty days from date of the transaction, and the subscriber must have mentioned Utah Farmer when writing the advertiser.

There is always room for a few roses in the garden. Why not take advantage of our offer and send today? What is more beautiful than roses?

If you cannot build a silo don't neglect to grow some root crops. They make a good rotation for the farm, and make a splendid feed for dairy cows.

When you plant shade trees around the home we suggest that you consider very carefully the English Walnut Tree. It will give you shade and beauty, and a crop of nuts besides.

See that the boy is encouraged by giving him one half an acre that he can call his own. Give him a calf or a colt to raise, or some chickens. It will create a greater interest for him on the farm.

Preparedness counts in farming just as much as any other thing in life. If you have prepared during the winter season for the spring rush that is now commencing, you will accomplish more, and with greater ease, you will know the value of being prepared for spring work.

We appreciate very much the increased advertising patronage we have in this week's paper, and we recommend to our readers that they look over all the advertisements, for often there is valuable information and helpful suggestions that

come from such progressive advertisers as are found in the Utah Farmer.

#### GOOD SEED.

We are so thoroughly convinced of the importance of good seed, that we again remind you, that it only pays to plant good seed. You should remember that it is true with plants that, "Like Begets Like." If we plant poor, scrub seeds, we will get poor, scrub crops. Seed should be carefully selected, and although the better quality may cost a little more, it pays. Generally speaking, the seeds that are acclimated to any given locality are the better ones to plant, if they are of a good quality. Many things go to influence the amount of the harvest in the fall, but not one has more effect upon good returns than the simple thing of selecting good seeds.

#### BEAUTIFY THE FARM HOMES.

It is surprising what a change can be made in the appearance of a farm home with a few trees and flowers planted around it. A cheerful looking farm home will go far toward attracting and holding interest on the farm.

Then think of the joys there are in life obtained from association with growing flowers and plants around the home. A farm home, well surrounded by trees, shrubs, and flowers always looks comfortable and inviting, and naturally conveys the impression that the occupants are contented and prosperous, and that they are the very kind of people with whom one would like to get acquainted.

The cost of a few shrubs of flower seeds is so small as compared to the pleasure received from growing and plucking them, that no farm home should be without them.

Now is the time to make plans and commence planting. Several experiment stations, such as the Illinois and the North Dakota Stations, have considered this of such importance, that they have issued special bulletins with the idea of helping the farmer in beautifying his home and surroundings.

A few roses can be obtained at such a small cost, that every farmer should plant some. See our offer on page 15.

Look over the pages of this issue, and if you have not already sent for the seed catalogues advertised, do so at once, and secure some choice flower seeds and shrubs for your home.

#### ADVANCE IN THE COST OF RAW MATERIAL

A serious question is confronting every manufacturer who is using certain lines of products that have been affected by the war. War conditions have created an increased demand for a much higher price for many articles we are manufacturing in the United States. Other manufacturers are seriously handicapped because they cannot get certain kinds of material that was previously manufactured in the European countries.

Take, for instance, the manufacture of paper. Certain chemicals that are used in the manufacture of paper have advanced to an extreme high price so that the paper dealers claim the average advance on all paper stock has gone up 30 per cent. In fact, the majority of the paper mills will not accept of your order only with the understanding that the market price is to be paid at the time of the delivery.

Manufacturers of Farm Implements tell us that

#### DR. WIDTSOE'S WEEKLY MESSAGE.

##### IRRIGATING BEFORE PLANTING

One of the first principles of irrigation farming is that, at planting time, the soil must be fairly moist to a depth of several feet. Wherever snow or rain falls in abundance during the winter the soils are usually in excellent condition, with respect to moisture, at planting time. The open, rather dry winter, however, which characterizes much of the West seldom leaves the soil with enough water in it to permit the young plant to get a fair start.

When the soil enters the spring in a somewhat dry condition, the common practice has been to sow the seed in the dry soil, and then to irrigate the land thoroughly. By this method good use has been made of the spring water, and indeed, very good crops have been obtained by this method of "irrigating up."

Nevertheless, it is always best to plant seed in land that already contains sufficient moisture to give the young plant an advantageous start, and, when the soils contain too little moisture, the attempt should be made to imitate the wet winter. This is accomplished by irrigating the land thoroughly in early spring before planting time, followed by planting, when the top soil has become dry enough.

This method has been tried out by numerous farmers, with the invariable result that it is better than the method of irrigating up." Professor L. M. Winsor has experimented on this subject in Sevier Valley. He found that by the usual method of irrigating up he harvested 59 bushels of oats and 28 bushels of barley per acre; but, by irrigating before planting his harvest rose to 72 bushels of oats and 47 bushels of barley per acre—an increase of 13 bushels of oats and 19 bushels of barley, with no real increase in labor or cost.

In explaining the advantage of irrigation before planting it must be remembered that the longer water remains in the soil before being used by plants, the more plant food it dissolves, and the more valuable it becomes in causing normal plant growth. The rich soil solution that is offered to plants by soils that have been kept moist to considerable depths throughout the winter or spring, stimulates rapid plant growth and produces vigorous plants that can endure the heat or the drought of the later season.

Soils that are too dry at planting time to germinate seed completely and to sustain the young plants properly, should as far as possible, be irrigated before planting time. The old method of "irrigating up" should be displaced by the more profitable method.

the cost of some raw material has advanced to such an extent that it will be necessary to increase the selling price. In some instances it is not altogether a question of the increase of price, it is a question of getting the raw material at any price.

Not all raw materials are advancing, but it seems that a great many have been affected by the war, either directly or indirectly, and that we can expect an increase in the cost in the near future, or else we will be getting poorer quality for the same price we have been paying.







## Questions and Answers

### VALUE OF COW—BY PRODUCTION

Utah Farmer:

Will you please state in your paper a relative value of a dairy cow, according to her production. What is her value if she produces  $\frac{1}{2}$  pound butter fat per day, her value if she produces 1 pound butter fat per day, etc.?

A. L. D.

Answered by Dr. W. E. Carroll.

The dairy cow which milks ten months out of a year and gives on the average one half pound of butter fat per day, may or may not be profitable, depending upon the price of feeds and the value of butter fat. Take, for example, any locality where it costs \$45 per year to feed a cow and butter fat is worth 30 cents per pound. The cow above mentioned would produce 150 pounds of butter fat, which would be worth 45 dollars, or the exact cost of the feed, the labor, interest on investment, and so on, would therefore be lost on such a cow. Under similar conditions a cow which will produce one pound of butter fat per day for ten months would return \$90, which would be \$45 in addition to the cost of feed.

Utah Farmer:

How deep do you advise sowing oats and wheat, and is there any difference in the different varieties as to what depth they should be put into the soil?

U. F.

Answered by Dr. F. S. Harris.

The depth at which oats and wheat should be planted is dependent on the nature of the soil and the amount of moisture available. As a rule these grains should be planted as shallow as possible and at the same time get soil sufficiently moist to germinate the seed. It is sometimes necessary to go down 4 or 5 inches to get moist soil, but it would be better if the grain only had to be planted about 2 inches deep.

Payson, Utah.

Utah Farmer:

Please give me some information how to prepare a seed bed for red clover and how much to sow per acre? Thanking you and wishing Utah Farmer success.

I remain very truly yours,

G. Fred Ott.

Answered by Dr. F. S. Harris.

Red clover requires a good soil that is well drained. The preparation of the land should be thorough similar to that for the planting of alfalfa. About 10 pounds to the acre of seed are required if planted alone, and from 6 to 8 pounds if planted with timothy. It can be planted either in the spring or the fall.

If you will send to the Utah Experiment Station for Circular No. 15, you will get considerable information in regard to handling the various grasses and clovers.

### WHAT A CERTIFICATE OF REGISTRATION SHOULD CONTAIN

Preston, Idaho.

Utah Farmer:

Gentlemen—In buying registered live stock, the person you are buying from often gives you a pedigree which only has record of ancestors about four or five generations back. Then

they refer you to an extended pedigree.

Will you please answer through your paper, how I can trace this back and tell whether it is genuine or not? There is some dishonest work done in this line and I would like to know how to detect this. Please sight record of foundation stock of Percheron horse, Holstein-Friesian and Short Horn cattle? Thanking you for an early reply.

A Subscriber.

Answered by Dr. W. E. Carroll.

A purebred animal if registered should have a certificate of registry. This certificate of registry is published by the particular breed association to which the animal belongs. It should contain the name and registry number of the animal, the date of birth of the animal, the name and number of the sire and of the dam, a short description of the animal as to color, marks, etc., the name of the breeder and the signature of the secretary of the association. It may contain more than this, but these are the essential points. There is no need of going further than the sire and dam of the animal to tell if it is purebred. If these animals have their registration numbers and they are known to be all right that is sufficient.

The various breed associations trace pedigrees for those interested, or anyone who has access to a set of the herd, stud, or flock books can do this work for themselves. A statement of foundation animals to any breed would be of little use to a man in tracing the pedigree to determine if the pedigree is authentic, as they are so far back that it would be a folly to attempt to trace that far.

### FEMININE DAIRY WISDOM

By Dorothy Tucker, in Farm Journal.  
Many calves die every year from scours that started from a filthy pail.  
Milk that sticks to the sides of a pail and becomes sour and rancid.

has caused the death of many a calf. Regular and intelligent feeding develops the profitable calf. Every calf should have the whole milk of its mother for about ten days.

Sweet skim-milk should gradually be substituted for the whole milk until the feed is wholly skim-milk. Oatmeal gruel and flaxseed jelly should be added to the skim-milk.

Supply the calves with fresh locks of clover or alfalfa hay as soon as they will nibble at it.

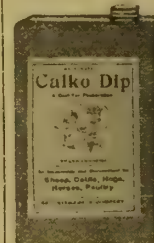
Give them all of this roughage that they will eat.

Be careful to give the milk regularly and at the same temperature every day.

Keep the stables dry and clean. No calf can thrive in a wet, stinking stable.

It is positively necessary to the perfect thrift of a calf that it has a

chance to drink pure fresh water every day.



### CALKO DIP

An insecticide and disinfectant for

Cattle, Sheep, Hogs, Horses and Poultry  
45c qt., 75c half gal., \$1.35 gal., delivered.

### CALKO

Stock Conditioner  
Keeps stock healthy and thriving.

CALKO HEALING POWDER heals saddle and collar galls, barb wire cuts, etc. Keeps flies flying.

Send in your order.

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McIntyre Bldg., Salt Lake City, Utah

Mention Utah Farmer when you write.

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We'll contract for your entire output at the market cash price.

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Our registered Duroc Jersey Hog business demands more of our attention, so we offer to lease to the right tenant 300 acres of our improved and cultivated lands:

100 acres of heavy growing alfalfa.

200 acres, excellent grain land.

With ample water right for the 300 acres—no alfalfa weevil, or other ruinous blight or insects.

Horses, harnesses, machinery, implements, tools, stables—living and bunk houses and everything necessary are included.

You can't make a mistake. If you want to lease, this is a wonderful opportunity. Our ads in THE UTAH FARMER always bring inquiries so if you want to know more about this place, write now—TODAY—Sure.

On Main Line Oregon Short Line R. R. 100 miles from Ogden.

**Richards Live Stock Co.**

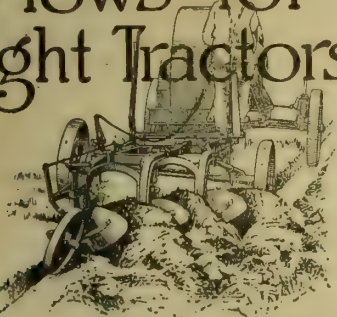
Jesse S. Richards Mgr.

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Virginia, Idaho.



# JOHN DEERE Plows for Light Tractors



## High and Level Lift

**PRACTICAL**—the right size for the average farm. Work with any standard tractor. Controlled by the man on the tractor.

Pull the rope and all the bottoms raise high and level. Another pull lets them down.

All bottoms raise high—like a double bail, high lift horse plow. You know from experience what this means. Plows do not clog or gather trash on the turn.

Extra wide and semi-floating front truck means uniform work and even depth of plowing.

Extra beam and bottom, readily attached, increases a regular two-bottom plow to a three bottom or a regular three-bottom plow to a four, as desired.

Famous John Deere Bottoms with Quick Detachable Shares that are taken off and put on in one-fifth the time it takes to change bolted shares. Booklet free.



## Van Brunt Single Disc Grain Drills

### with Adjustable Gate Force Feed

**PLANT** any small grain, from alfalfa to bearded oats, corn and peas, even in trash, gumbo or mud. Adjustable gate force feed compels an even, continuous flow through each seed tube.

They are light weight, light draft, well balanced and strong. Frame is rigid; hopper does not sag; the gear drive is positive and the disc bearings are guaranteed to last lifetime of drill. Spring steel scrapers keep discs clean.



## John Deere Grain Binder

### With All Steel, Quick Turn Tongue Truck

**THE** Better Binder. Truck turns machine faster than team turns. Saves time in turning, square corners are made, and full swaths taken at the turns.

Stub tongue is all steel, hot riveted—no breaking, splitting or rotting. All steel eveners.

The binder that is noted for its light draft, sure cutting, elevating and tying. Ask for free booklet.

**BOOK FREE** "BETTER FARM IMPLEMENTS AND HOW TO USE THEM"—168 page reference book—tells all about a complete line of implements and how to adjust and use many of them. Worth dollars. Sent free to any one who tells what implements he is interested in. Ask for Package X-160.

**JOHN DEERE, Moline, Ill.**

For Sale by John Deere Dealers Everywhere

# Beautifying the Home Grounds

By Emil Hansen, Florist, Utah Agricultural College.

When speaking or thinking of "Home" we all more or less are touching a tender string in our heart. We are not thinking merely of the house, but the home surroundings is the living picture appearing in our memory.

It is pleasant to think of a home framed with shade trees, shrubs, roses and other flowers, and everybody, young or old, enjoys looking at a well-kept piece of ground be it large or small.

The humble house surrounded with lawns and trees gives one more of the impression of a "home" than does the mansion without these; be it ever so expensive it will look cold and uninviting.

Yet we have many places throughout the State where the spirit of improvement has not yet reached. Of course we have reasons to believe that many wish to improve their home surroundings, but on account of conditions, such as lack of water, etc., are unable to do so, while others with a little extra work and a little expense would be able to beautify their homes and increase their value.

There are various types of landscape gardening, such as the English, French and Italian. These are more or less formal than is the natural landscape gardening, but the writer does not attempt to suggest any set style. Every house and its surroundings should suggest its own design, and the designer should form his or her own original idea in accordance with the situation.

However, there are certain principles to be followed in every case as to the arrangement and planting of trees and shrubs to secure a satisfactory result. The general layout of the ground should be open. This means that shrubs and bushes should be planted in groups along the fences or around the house or some corner of the lawn. The bushes should be arranged in accordance with their growth, so that the lowest growing shrubs are planted in the outside row, and by planting them irregularly with a distance of from four to eight feet apart according to the growth of the plants, a natural appearance is given them. The aim should be to make the planting appear as if it had naturally grown there.

Bushes should not be planted on the lawn along the walks; the lawn should as much as possible be kept open, with the exception of a single lawn tree here and there, which under certain conditions gives a good effect. For this purpose the writer would suggest the use of any of the following varieties, such as the Colorado Blue Spruce, Double Flowering Hawthorn, Camperdown Elm (weeping), Cutleaved Birch, Beech (green or purple leaved) and Mountain Ash.

As a help in selecting a variety of shrubs the following are mentioned, which if planted together will give a variation in color, time of blooming, and in color of the foliage:

Cytisus laburnum (golden chain) yellow, Prunus pissardi, purple leaved, Lilac in various colors, Althea in various colors, Berberis thunbergii, yellow flowers, corral red berries, Berberis Atropurpurea,

purple leaved, Cydonia Japonica (Japanese Quince) early red, Weigella, red, white and pink, Forsythia, yellow, Hydrangea, late flowering, Lonicera, pink, Philadelphus (Mock orange) white, Deutzia, white and pink, Ribes Aurea, yellow, Sambucus Nigra (Elderberry) white flowers, black berries, Sambucus Racemosa, white flowers, red berries, Sambucus Aurea Folia Variagata, variegated leaves, Spirea Sorbifolia, white, Spirea von Hautii (Bridal wreath) white, Viburnum opulus sterile (Snowball), Tamarix, pink.

The question often arises as to what kind of shade and ornamental trees to plant. There are many varieties in the market and for general purposes the following are more or less common but always give good satisfaction:

Norway Maple, green and purple leaved, Ash, European Elm, Sycamore, European and American Linden, Horse Chestnut.

Where space is limited and a number of trees are desired the White Birch and Balleana Poplar can be used as they do not spread so much but have an erect growth. Where quick growth is desired, or for a windbreak, or if planted where the ground is wet, the Caroline Poplar is best.

### Planting of Trees and Shrubs.

When planting trees it is important that the hole be dug plenty deep and wide enough so that roots can be spread out in a natural condition. All plants should be planted a little deeper than the previous planting. Good soil should be used around the roots. Manure of any kind should never be used when planting trees or shrubs. However, it is well to cover the soil around them and then put on a coat of manure after they have been planted. When the roots have been spread out in the hole, fine soil should be worked in between them and when the roots are all covered the tree should then be shaken. This will cause the soil to work in amongst the finer roots. After this is done the hole can be filled with soil and then tramped down hard, after which a good watering should be applied. If each tree is given plenty of water this will cause the soil to settle down around the roots. After the water has soaked in, a coating of mulch should be placed around the trees, which will prevent quick drying of the soil.

### Planting of Roses.

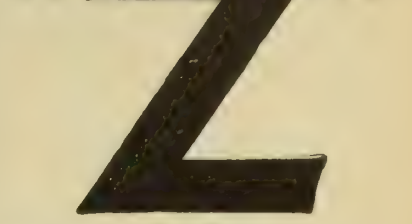
It is best to plant roses in a bed instead of planting a single plant here and there on the lawn. By planting in beds they can be cultivated and fertilized much more conveniently. The bed should be dug at least one foot deep and the soil thoroughly mixed with well-rotted stable manure. Under no circumstances should manure be put into the holes when planting.

For winter protection a heap of manure can be placed around each rosebush in the fall and allowed to remain until about April, when it can be spread on the bed and dug in.

At that time it is best to prune the bushes by thinning out the weakest shoots where they have grown too

(Continued on page 13)

# THE NEW "Z"



## ENGINE 1½ h.p. \$35

on skids with  
**BUILT-IN  
MAGNETO**

3 h. p. \$60  
6 h. p. \$110  
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Fairbanks-Morse quality—service—dependability—at a popular price, tells the story.

## More than rated power and a wonder at the price

Simple—Light Weight—Substantial—Fool-proof construction—Gun Barrel Cylinder Bore—Leak-proof compression—Complete with Built-in Magneto. Quick starting even in cold weather. Low first cost—low fuel cost—low maintenance cost. Long, efficient, economical "power service."

### See the "Z" and You'll Buy It

Go to the dealer—see the features that make the new "Z" the one best engine "buy" for you. When you buy an engine from your dealer you deal with a local representative of the manufacturers. He stands behind the engine he sells. He's responsible to you. He's at your service to see that you are satisfied.

### FAIRBANKS, MORSE & CO., Chicago

All Fairbanks-Morse dealers sell "Z" engines on a zone carload low freight basis. If you don't know the local dealer—write us.

## THE BEST \$45.00 strictly all oak tanned western Double Team



**\$36**

our new  
Catalog  
sent free

Hame tugs, 1½ inch, with three loops and patent buckle. Traces 2½ inches solid single ply, with cockeyes.

**THE FRED MUELLER SADDLE & HARNESS CO.,**

1413-15-17-19 Larimer St.,  
DENVER, COLO.



## The Original Brillion Will Increase Your Yield 8 to 15 Bushels Per Acre

The original Brillion Clod Crusher protects you against drouth by causing moisture to be retained a few inches below the surface. It crushes, pulverizes, rolls, levels, packs the soil, making a perfect seed bed.

The increased yield will more than pay for it the first year. Write for FREE BOOKLET.

## MOLINE PLOW CO.

Dept. 422 MOLINE, ILL.



# Why Bankers and Business Men Should Encourage Dairying

Fred W. Merrill.

In a recent issue of one of the leading agricultural papers of the Northwest appeared an article under the title, "Bankers Must Help Farmers Buy Cows." Due to the active interest that is being taken by farmers, bankers and business men generally in all sections of the country, it might be well to say a word more on this subject.

There is no question but what the purchase of good dairy cows for a community is a good thing. There is no domestic animal that will return as fair and sure a profit and as steady an income as a good dairy cow, and there is no farm but what would be a better farm if a few or many (according to the circumstances) good dairy cows were kept on it.

It is also a safe proposition for the bankers of a community to finance the dairy cow proposition. There are, of course, chances to lose out on a deal of that kind, but our bankers as a rule are conservative. They know their customers well and can manage the undertaking in such way as to come out even if they will study the proposition from all angles.

A large majority of our farmers, whether they are on the small irrigated farm, or on our dry land farms, or are located on humid sections, are not financially able to pay "cash down" for dairy stock, and even if they were—there are not many men who want to go away to purchase just the few with which they want to start. It would be too expensive for each farmer to follow a plan like that. Even if this were possible, it would not be a good policy because there would be no community interest, no co-operation among the farmers for the production of uniform stock, and a large number of failures are likely to occur, resulting from the purchase of poor stock.

Dairying is a co-operative proposition from the breeding of the cow to the sale of the finished products. No matter where you look for successful dairying, in foreign countries or in our own prosperous dairy sections, you find it most profitable and most successful from every point of view if there is a form and spirit of co-operation among all those interested.

So throughout the entire Northwest

inasmuch as dairying is just in its infancy, let us start right and have no failures. Encourage the bankers to finance the purchase of dairy stock, but first of all let each community decide just which kind of stock it wants to buy.

What breed for example? No community is financially able to start and develop four or five dairy breeds, but any community can develop one to the extent that in 15 or 20 years it would have a surplus of dairy stock to sell, and the fact that the stock were all of one kind would advertise the proposition everywhere and bring buyers from far and near. Why do we go to Jefferson County, Wis., to buy Holsteins or to Waukesha County, Wis., to buy Guernseys? Because the people in those counties decided 25 years ago, to breed one kind.

Stock is being shipped from those two counties to every state in the Union, to Canada and Mexico and even to Australia and Japan.

There is not so much difference in the value of any of the four standard dairy breeds but what all the members of a community could decide on one that would suit the majority.

The best feature of this proposition is the opportunity it affords for good breeding. A few high class, well bred bulls—bulls whose sires and dams are animals of merit, could be used exclusively in the community and breed up the native stock. After all is said and done—there is no better way to start dairying than to grow into it, by purchasing pure bred bulls and breeding them to our native cows which show dairy qualities.

The bankers should have it understood among the farmers that they are buying the foundation stock, and the object of buying is to enable them to get started along the right lines and to build permanently. I think it is not asking too much of the farmers to have it distinctly understood before purchases are made that they will, by the continuous use of pure bred bulls, breed up the stock they already have to a high standard. So instead of having for our slogan, "Buy Cows," let us make it "Buy Bulls."

I do not believe very much in buying cows anyway. It is only occasionally when good dairy cows are for sale—and no community can afford to buy poor ones.

Would it not be better to buy heifers and let them develop into cows? Your chances of getting good stock are better, your investment is not so large and it is easier to secure them.

There is no serious objection to purchasing cows if the man who does the selecting knows his business, and can avoid diseases, spoiled udders, non-breeders, aged cows and a number of other abnormal conditions. It often happens that a man in a dairy section wants to retire, or for other reasons wants to sell out. His stock represents his life's work in breeding and selecting and so good producing animals can often be selected.

About the only objection I can raise to the "Bankers Buy Cows" deal is that poor selections might be made. The man who selects dairy cows has a very responsible position to fill. He should be a real dairyman from actual

dairy cows, and from year of hard study and observation. He should have had experience in buying and be onto the "tricks of the trade," understand the state laws regarding experience in milking and handling the shipment of stock from one state to another. He must understand the tuberculin test and the regulations governing it, and if possible be able to detect other diseases, especially unsound udders.

If he has acquaintances in the community where he makes his purchases, he is that much better fortified.

I know of instances where men have bought carloads of dairy stock and yet never milked a cow in their lives. This, of course, doesn't mean entirely that they didn't know the good qualities of dairy stock, but the stock they purchased justified the assumption that they did not.

The idea of purchasing cows for farmers is not for bankers alone, but for all business men. In some of our Northwestern states, the realty men, who are interested in the permanent development of the country, and are locating people for that purpose and not for mere speculation, are devising plans to assure the newcomer of a permanent living. To do this they provide the settler with some dairy cows and one or two good brood sows.

They know that if a man will milk cows he has something to sell every day in the year—his living is

provided—he has no store bills accumulating beyond his ability to pay. If drouth comes, he does not have to pick up and move. He must necessarily raise a variety of feeds. He has some manure to put on his land, and thereby keep up its fertility, and increase its water holding capacity. He erects some permanent buildings for his stock and when all the farmers are doing this, it gives the country an appearance of stability and permanency and promotes local pride.

I have watched with interest the development of our new farm sections, and when I see any farmer surrounding himself with dairy cows and hogs, I have no doubt in the world of his success and permanency.

The business men of the towns and cities, and especially those who are interested in the development of the farm lands, can do nothing better than to induce the farmers, especially the newcomers, to keep cows, and if it is necessary assist them financially to get started.

The dairy business is one in a class by itself and requires the life time of men to master it. There is no phase of it but what requires earnest, conscientious thought and study. The dairy farmer must be an exceptionally good farm manager, and he needs the moral and financial support of the business men with whom he transacts his business. The majority of failures come from men who go into the industry haphazardly

For 57 years this bank has been identified with the development of the intermountain region.

Progressive and steadily growing it offers YOU the benefit of its extensive facilities.

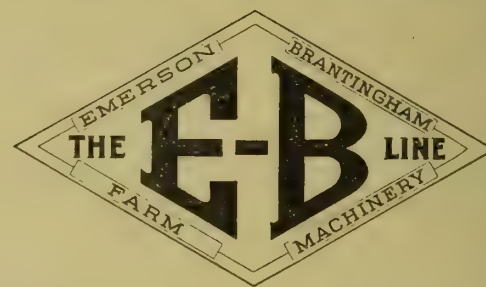
**Walker Brothers  
Bankers**

SALT LAKE CITY

Resources over \$6,000,000.



## What E-B Means To You



The E-B trade-mark is your guarantee of Quality. It shows the way to easier, better and more profitable farming. For 64 years the E-B line of Farm Machinery has been standard.

Since 1852 a continually increasing demand from users of farm machinery for the E-B Foot Lift Line resulted in the building of a complete new plant equipped with special machinery and every modern labor saving device.

This means much to the farmer of today. When he selects implements to save money, lighten labor, or speed up work on the farm, he can turn to those bearing the E-B trade-mark with the assurance that these machines embody every feature that years of actual field work can recommend.

**MILLER-CAHOON COMPANY**

Murray, Utah

Idaho Falls, Idaho



with the idea that it can be operated as solvently as they have been performing other farm work, and will not receive suggestions from practical, experienced men. They do not read dairy papers or farm journals or keep abreast with modern dairy practices. But with the industry supported by the leading men of the community, who are looking for new ideas and new improvements that will add to the prosperity of the country, there is not much chance for very many men to fail.

Our farmers need dairy institutes and dairy schools held in the country school houses. They need the dairy papers. They should read and study them, and in every way possible they should be encouraged to improve farm conditions throughout the country.

You show me a country where the business men and farmers are all interested together for the development of the community's resources, and I will show you a community that is prosperous and contented—a community of good farms, good homes, good roads, good towns and good people.

Let us not be over enthusiastic, but conservative in encouraging the dairy industry in all sections of the country where it is adaptable. The possibilities are great and all they need is safe and sane development.

#### SPRING HARROWING OF WHEAT

A. B. Ballantyne, Agent Utah County. Often in the course of County Agent travels, the question "Shall I harrow my wheat," comes up. While not agreeing with those who have ardently advocated the harrowing of wheat to thicken the stand the writer has not had any figures to back him up. The following experience of J. H. Gardner of Lehi, is presented for the consideration of those having heavy clay soil that may crust and thus prevent the grain from coming up satisfactorily.

In the spring of 1915 Mr. Gardner faced the condition of a poor stand of his fall sown wheat, and as usual found that a good many of the wheat plants, not being able to penetrate the crust on the clay soil, were growing along under it, apparently the logical thing to do in such a case was to break the crust and so let the plants through. For this purpose a harrow was used and as Mr. Gardner expressed it he "harrowed it good." Across the track from the first piece he harrowed as a field of thirty-three acres all parts of which had been cultivated and planted about the same.

The eastern 15.3 acres was harrowed about April 5th; but when the harrowing had gone that far the harrowed portion looked so "tough" that it was decided to stop the work. Accordingly the remaining 17.7 acres were left untouched. The difference through the summer was so marked that the Utah County Agent suggested that the two portions be harvested separately. This was done and the land was measured by the County Agent and A. D. Gardner, the latter also keeping the yields.

The harrowed portion yielded 19.5 bushels per acre while the portion not harrowed yielded 20.9 bushels per acre. The wheat was sold for \$ .90 per bushel making the loss from harrowing \$1.26 per acre; adding to this \$ .50 for harrowing the total loss was \$1.75 per acre.

After cutting, three or four times as

many Russian thistles came up as did on the area not harrowed, and if the land had been abundantly seeded to sunflowers it is very probable that they would have interfered with the harvesting on the area harrowed.

It is well to keep in mind that this was a rather heavy clay loam soil the kind that is found in many of our Dry-Farm sections, and that the stand was very thin in the beginning. Also that this is only one instance where accurate record was kept of the areas involved and the yields obtained.

#### STAY ON THE FARM

Come, boys, I have something to tell you;

Come here, I will whisper it low;  
You're thinking of leaving the homestead;

Don't be in a hurry to go.  
The city has many attractions,  
But think of its vices and sins;  
When in the vortex of fashion,  
How soon our destruction begins.

Stay on the farm, stay on the farm,  
Tho' profits come rather slow;  
Stay on the farm, stay on the farm,  
Don't be in a hurry to go.

You talk of the mines of Nevada;  
They're wealthy in treasure no doubt;  
But, ah, there is gold in the farm, boys,  
If only you'll shovel it out.  
The mercantile life is a hazard  
Surrounded by glitter and show;  
And wealth is not made in a day, boys;  
Don't be in a hurry to go.

Stay on the farm, stay on the farm,

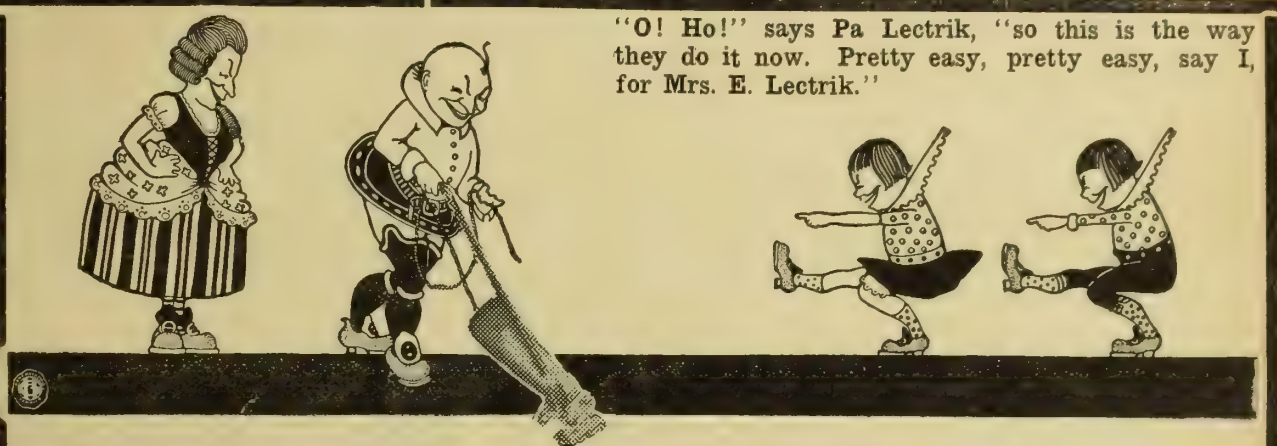
Tho' profits come rather slow;  
Stay on the farm, stay on the farm,  
Don't be in a hurry to go.

The farm is the best and the safest,  
And certainly surest to pay;  
You're free as the air of the mountain,  
And monarch of all you survey.  
Then stay on the farm awhile longer,  
Tho' profits come rather slow;  
Remember you've nothing to risk, boys;  
Don't be in a hurry to go.

Stay on the farm, stay on the farm,  
Tho' profits come rather slow;  
Stay on the farm, stay on the farm,  
Don't be in a hurry to go.

—Selected.

As the calf is, so will the cow be.  
How will it be with yours:—Farm Journal.



Introducing Mr. and Mrs. E. Lectrik and the little "Tricks."

Extra Special 30 Day Offering!

## THE POPPY Electric Vacuum Sweeper

During the entire month of March, as an Extra Special Offering, at \$27.50—in payments of

**\$5.50 DOWN; \$2.00 A MONTH**

You Ought To See This Electric Carpet Sweeper

The dustless way to sweep.  
The easy way.

And not only to sweep—but to clean every nook and corner of your home. In just a moment's time you detach the sweeper and put on the special utensils that make it possible for you to clean your curtains and draperies, your upholstered furniture the mattresses, the pillows, and all the nooks and corners where dust and dirt accumulate. This—madam—is the electric way to clean and sweep—the vacuum cleaner way. It costs less than ONE CENT PER HOUR to operate. You'll do your average morning's sweeping in less than twenty minutes with a vacuum cleaner, and it will cost you only ONE-THIRD OF A CENT.

You'll be astonished at the ease of operation—the simplicity—and the strength and durability of the electric vacuum cleaners we are waiting to show you. In addition to getting all the dirt the electric vacuum sweeper brightens your carpet and rugs amazingly. The soft hair brush does this by raising and straightening the crushed nap. It prolongs the life of the carpet.

A vacuum cleaner that we will guarantee will cost you, cash, \$25.00. And our confidence in electric vacuum sweeping and cleaning is illustrated by the fact that we shall be very glad to let you have it on a payment plan at \$27.50—\$5.50 down and \$2.00 a month thereafter until paid for.

Our stock of electric vacuum sweepers is very complete, and it will be a pleasure to show you several models and sizes.

Special offer for March on Electric Washing Machines, Electric Sewing Machine Motors, and Electric Vibrators.

The press of a button and you may flood your home with the Master-Music of Beethoven, Verdi, Wagner, Strauss, on the Electrically-Driven Player-Plano or the Electrically-Operated Talking-Machine Which may be played absolutely without effort. Consult your electric light man, or your regular piano dealer.

**UTAH POWER & LIGHT CO.**

"Efficient Public Service"



## THE HOME

### MOTOR POWER IN THE HOME

Mrs. Amy Baker.

A person never misses a thing unless they have first enjoyed its benefits. So it is with machinery in the home. After having used it, we can realize and appreciate it, then it we are ever placed in a condition where we have to be without it we wonder how we ever got along without its aid, especially since it is so hard to get hired help.

Those who have had the pleasure of using an electric washer will undoubtedly say it is a great labor saver. It is impossible for some women to do a washing without a wash board, consequently they have to hire it done, but the aid of a power machine they can accomplish that labor without much difficulty. And yet at the same time these people think they cannot afford a motor power on account of its first cost; but if they would only stop and consider what they have to pay to hire the washing done, they would find that the money paid for niring it would soon pay for the machine, as it costs 25c per dozen on an average. Besides this, we have the satisfaction of getting it done properly and when needed. Some people have an idea that a washer will not clean the clothes, but experience has taught me that a little more soap and water sufficiently hot, will cleanse them thoroughly without the aid of a board. Another advantage of the power washer is that while it is running, we can be performing other duties. A washer properly cared for will last a number of years. Of course it depends on how it is cared for. It should be properly oiled every time it is used. All burrs kept tight, and kept under shelter where the sun or wind cannot get at it; also kept in a stationary place, for the moving of it from time to time will do much harm. Have observed instances where the washer was moved in and out of doors, there to remain in all kinds of weather until next wash day. Very likely the water that should have been put in has been forgotten. The result is, a fallen-down condition. It burrs are allowed to get loose and remain so, the bearings and cogs soon begin to wear.

The cost and care being considered, I will now try and tell the cost of

running it. It takes 95 watts to run the average washing machine and wringer, in localities where the rate is 11 cent per thousand watts. The cost will be 1½ cents per hour for electric power. But from the information I can get, the price of electricity is higher here than in some other places. In Beaver, for instance, it is only 7 cents per thousand watts.

The electric iron is also a great saving device. It saves energy, time, and fuel. The energy and time used in walking to and fro, between the stove and ironing board, can be used to better advantage by staying in one place until the ironing is accomplished. In winter weather the saving isn't so great, as we usually have to keep a fire to keep warm, then the common iron may be used to save expense, but not energy. Those who have had the experience of ironing in hot summer months, over a hot cook-stove, appreciate the electric iron, as you are able to iron in a cool room if not with a cool iron. It consumes from 500 to 600 watts per hour, and the cost to run it where the rate for power is 11 cents would be 6 to 6½ cents per hour.

The cream separator plays a very important part on the farm or in the dairy. Think of the time, labor, and space saved by this wonderful machine. Those who have had the experience of caring for milk without the aid of a separator know the amount of time and labor it takes to care for milk properly. For a very large amount of milk it takes a great many shelves which require space and expense. Then there are pans to buy, milk to set, skim and empty, pans to wash, scald and air. This is to be done twice every day. No wonder some of us are broken down, when we think of the labor we have performed. The separator saves practically all this labor, not the labor alone but the butterfat as well, so it pays to own one if you have but one cow. It is to our advantage to purchase a clean skimmer, as all do not skim clean. The power separator has advantages over the hand machine, as it saves energy and time. Other labor can be done while the power is doing its work. It will outlast the hand machine because the power is more regular and is capable of greater capacity. A 675 pound capacity consumes 142 watts per hour, or 1-4 horse power, which would cost about 2 cents per hour.

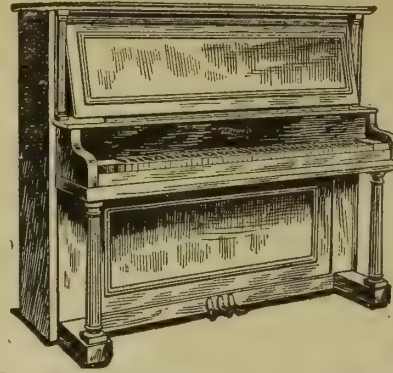
At present there is a great deal of talk of the advantage of living on a farm, but many hesitate, thinking they would have to give up these conveniences which they have in town. But the same machines can be run by gasoline power as well, for instance, corn shellers, wood saws, pumps, feed mills, grinding stones, and others that might be mentioned. And today the price of engines are within the reach of most farmers. A one horse power engine is capable of running these things at a cost of 4 cents per hour. Some may think some of the things mentioned do not concern the home, but what interests the husband should interest the wife.

The laying hen is the farmer's wife's best friend.

### THERE IS NO DIFFERENCE

Great experts agree that highly refined beet sugar is exactly the same, both chemically and diatetically, as the fanciest imported cane sugar. Your purchase of Table and Preserving Sugar brings quality and also upbuilds an industry of the west.

**AMALGAMATED SUGAR CO.**  
OGDEN, UTAH.



# SAVE

## One-Half

## On a Piano

## BUY A USED PIANO

We have a number of rebuilt and rented pianos and player-pianos which we are compelled to sell to make room for incoming stock. Some of these we have been forced to repossess, others are new pianos that have been returned from rent. Most of them have been in homes where they have had good care; several have been out less than a year! Some are half paid for already! We are going to give the benefit of what "the other fellow" has paid. Prices have been made that will move them all within a very short time.

Our list, with descriptions that would do these instruments justice, is too large to publish. If interested in saving one-half on a Piano or Player-Piano, fill out the enclosed coupon, and we will mail you a list with full description of these great bargains.

**CONSOLIDATED MUSIC CO.,**  
Salt Lake, Utah.  
Gentlemen:—Please mail me your list  
of rebuilt and rented  
Pianos      Players  
I prefer.....case  
Name .....  
Address .....

### Do This Now!

This is the opportunity you have been waiting for.

**Fill Out and Mail  
Coupon to**

**"House of Steinway"**

## Consolidated Music Co.

ESTABLISHED 1862 13-19 E. FIRST SOUTH ST. ROYAL W. DAYNES  
MANAGER

"54 YEARS IN BUSINESS."

SALT LAKE CITY UTAH

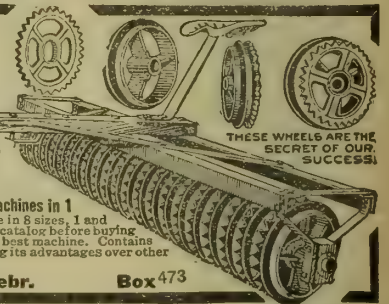
### WHEAT, ALFALFA

and other grains yield more where a perfect seed bed is prepared. The Western pulverizes, packs and mulches—makes a perfect seed bed at one operation. Saves seed, time and horse power. Is especially adapted for breaking crust on winter wheat or other grain or in orchards after irrigation or packing rains. It forms the hardest crust into a granular mulch without hurting the grain, and prevents evaporation.

**Western Pulverizer, Packer and Mulcher** 3 Machines in 1 made in 8 sizes, 1 and 8 sections, prices \$20 and up. We want every farmer to have our free catalog before buying a roller or packer. It proves we can save you money and have far the best machine. Contains full description, price direct to you, letters from many farmers proving its advantages over other makes, and much other valuable information. Send for it today.

**WESTERN LAND ROLLER CO., Hastings, Nebr.**

Box 473



### Just Drive—Let The Aspinwall Do All Your Potato Planting

ONE man and the Aspinwall plant 5 to 8 acres of potatoes a day—and plant them right. Machine opens furrow, drops seed—any size—any distance, covers, marks next row, and if desired, sows fertilizer all in one operation. Corn, Pea, and Bean planting attachment furnished when wanted.

### Aspinwall Potato Planter

60,000 Users. World's Oldest and Largest Makers of Potato Machinery. Will answer personally any questions on Potato Growing. Write for free booklet.

**ASPINWALL MANUFACTURING CO.**  
520 Sabin Street Jackson, Michigan  
Cutters, Planters, Sprayers, Diggers, Sorters.



### A GOOD BUY FOR ONE DOLLAR

Can you think of something that will be more helpful to you than a weekly visit of the Utah Farmer. Brimful of good sound advice, helpful suggestions on every phase of farming and farm life. Our 800 pages of good reading for one dollar. Comes 52 times during the year. Renew your subscription today.



## CLOTHES FOR THE SMALL BOY.

The question of providing neat and comfortable clothing for the small boy is one that the economical woman who has a little son to care for, should study carefully. Cheap, ready-made suits are seldom satisfactory in fit, make or quality of material. Good patterns are cheap now, and with their aid garments that are stylish in appearance and perfect in fit, may be made at home. Careful finishing and thorough pressing are absolutely essential to success in this work, for without them, the best garments will have a "home-made" look that no boy admires.

As to material, the most economical way of buying it is to get remnants from the tailor or dry goods store. Excellent cloth can often be obtained for half what it would cost in a regular way.

But while you have the discarded suits of the father or some other man of the family at your command, it is seldom necessary to buy new goods. A pair of long trousers will usually contain enough good material to make a short pair, and the little coats are easily cut from the back and other portions of the coat that are not much worn. Sometimes the goods needs nothing than a thorough washing in warm suds to make it look

like new, but if it is faded and dirty looking, it can be dyed any dark color you wish with diamond dye for wool, and the little boy will be much better pleased with them, than if they were left the same color they were when some one else wore them. Navy blue, brown and black are the colors usually chosen.

After the trousers are cut out, the edges should be over-handed and the pieces basted together. All the bands, flies and pockets are to be sewed to their places and finished before the legs are sewed up, and every seam neatly pressed. If they are knee pants, finish the lower edge with a narrow hem, sewing it to the outside with invisible stitches. If you are a novice in this kind of work examine a tailor made garment, and you will have no trouble in putting them together and finishing them properly.

The Norfolk jacket is a favorite for boys between seven and twelve years of age and almost any cloth used for men's suits is suitable for them. The very small boy wears knickerbockers buttoned to an under-waist, and a Russian blouse with black patent leather belt. These suits are usually made of serge, cheviot, broad cloth or other woolen goods, and many an old dress skirt has been utilized in this way—E. J. C.

## HOW WE PRODUCE OUR SEED POTATOES

We, like other seed houses, have had considerable trouble to find suitable seed potatoes, stock we could recommend free from disease and which would be of special merit as to reproducing itself and we made up our minds to offer our customers stock that is true to type, color and size.

The Government has established a station for the production of pure, clean and suitable seed potatoes at Jerome, Idaho. A visit to the station convinced us that they had some clean stock which we wanted and we bought what they could spare, planted them on new sage-brush ground, watering them once, dried them up the latter part of July and harvested them the middle of October and got a yield of 40 bags per acre, none larger than hen eggs. Now we have a stock as firm as rocks, perfect in type and absolutely free from disease. We planted 45 acres of this seed stock on old alfalfa ground and produced 260 bags per acre. We also selected three varieties and sent them to the National Potato Show at Michigan and were awarded the first prize on each.

If you want potatoes of special merit, potatoes that will make you money, write us.

VOGELER SEED CO.  
Salt Lake City, Utah.

## BEAUTIFYING THE HOME GROUNDS.

(Continued from page 9)

thick and by cutting the remaining shoots back two-thirds of their length, but it is well to take notice that the cut is made right over a bud which turns outward.

The following are a few hardy varieties of various colors:

Keiserin Augusta Victoria.....	cream
LaFrance .....	pink
Caroline Testout.....	bright pink
Alfred Colomb .....	crimson
Fisher Holmes.....	dark red
Frau Karl Drausky.....	pure white
General Jacqueminot.....	dark red
Paul Neron.....	large pink
Ulrik Brunner.....	cherry red
Chrested Moss Roses.....	pink and white

## Making of Lawns.

It is sometimes seen that when excavating is done for a cellar or foundation to a building that the subsoil has been spread over the top soil to make a grade for the lawn. In this subsoil nothing can grow until it has been weathered, worked and fertilized. For this reason it is best to remove the top soil before grading and replace it again after the subsoil has been spread.

A lawn requires a rich soil of a depth from six to eight inches on top of the bed of gravel or other porous subsoil which insures drainage. If the soil in the plot on which the lawn is desired is not rich enough, plenty of well-rotted manure should be added and mixed with the soil to a depth of six to eight inches.

After the soil has been graded and raked into the desired shape, it is ready for seeding. It is advisable to prepare the plot for the lawn during the fall and have it ready for seeding in the early spring as soon as the ground is dry enough to rake. By this method the seeds get the benefit of the spring rain.

When seeding it is best to make two sowings, the second sowing cross-wise of the first. By so doing the seed will be more evenly distributed. After sowing the seeds should be

## Why Clutter Your House With Pipes and Flues?

(Copyright 1915 by The Monitor Stove & Range Co.)  
Make your house comfortable. Many farm home owners are deterred from installing a furnace through unwillingness to mutilate the house in order to put in pipes. This trouble and expense are now unnecessary because we offer you

## A Patented One Register Furnace

Our wonderful invention makes this possible. You cut just one hole for a register immediately above our furnace and the warm air circulates through the house. No pipes or flues. Your house is cozy from top to bottom. Can be installed in any house, new or old, almost as easily as a stove. By digging a pit you can even put it in a house that has no cellar. The

Easy  
To  
Install

PIPELESS  
**CALORIC**  
FURNACE

Saves  
You  
Money

is guaranteed to use 35% less fuel. Special ribbed firepot gives 600 square inches greater heat radiation than the average firepot. There are no pipes running through the house and cellar to waste heat. The ribbing provides a free air circulation which permits thorough burning of coal without wasteful clinkers. No ashes clinging to firepot to retard circulation.

The Caloric Pipeless Furnace burns coal, coke or wood equally well. It does away with the disagreeable task of carrying fuel upstairs and ashes down stairs. It keeps the upstairs rooms and halls uniformly heated at all times.

It is safe for children because there are no hot registers in upstairs rooms to burn them. This is the one furnace that will not spoil your produce in the basement.

Takes less cellar room than an ordinary furnace and saves stove room through the house.

## Our Liberal Guarantee

Put this furnace in your home and give it a thorough try-out. If it is not perfectly satisfactory we'll make it so any time within one year from date of purchase. You can't go wrong when you fit your house with the Caloric Pipeless Furnace because we absolutely guarantee it.

Ask Your Dealer or Write For Catalog

If there is a Caloric dealer in your town he will gladly give you a copy of this book and show you the furnace. If there is no dealer write us direct.

Monitor Stove & Range  
Company

335 Gest St. Cincinnati, Ohio

raked down with a rake, or if the plot is a large one it may be harrowed lightly and then rolled.

The quantity of seed required for an area of 2,500 square feet (50 x 50 ft.) is eight quarts or five bushels to an acre.

It is important to add fertilizer to the lawns every year. It is really seen that when the grass has been cut week after week throughout the summer the turf naturally becomes exhausted.

The fertilizer, whether it be stable manure or commercial fertilizer, should be applied sometime between the first part of December and the first of March. However, it is best to apply this during the early part of the period mentioned.

The great advantages of dairying are that the products are always in demand at good prices, that the product is condensed and removes from the farm a very small quantity of fertility, the product is economical in delivery, and being a perishable product must be sold often, which means that the cash is realized a few days after it is produced. The fact that dairying furnishes a steady income throughout the year, along with the insurance above mentioned, commends it to the best farmers—Exchange.

Now is the time to send in your subscription to the Farmer, \$1.00 for a hold year.

## Do You Say "Utah-Idaho" When Ordering Sugar

If you don't order "Utah-Idaho" what kind of sugar do you get? Surely you are not satisfied to receive 'any old kind.'

It has been proven by the United States Government, certain of the States, noted Chemists and Domestic Science Teachers that beet sugar is as pure and as good as any highly refined sugar made. The same amount of Utah-Idaho Sugar will accomplish the same results, as any other sugar you can buy.

Then, why not take an interest in this home product, order it every time you have occasion to order sugar. You are sure of its perfectness and absolute purity, because it is made in sanitary factories from raw products grown in the most healthful climate in the world, and it travels so short a distance to your table that there is no possible chance for it to become contaminated in transit.

Place your next order for "Utah-Idaho."

UTAH-IDAHO SUGAR  
ABSOLUTE Purity

**Big Money in Running Water**

Let us start you in a business that will make you from \$15 to \$50 a day when farm work is slack. Other men have done it for years with an

**Improved Powers Combined Well Boring and Drilling Machine**

Same rig borers through any soil at rate of 100 ft. in 10 hours, and drills through rock. One team hauls and operates machine. Engine power if wanted. Easy to operate—no experts needed.

Small investment; easy terms. Make machine pay for itself in a few weeks work.

There is a big demand for well-bore water, stock and for irrigation. Write for free illustrated catalog showing different styles.

Lisle Manufacturing Co.  
Box 970 Clarinda, Iowa



## A Woodlot For Every Farm

Joseph A. Smith.

Every farmstead in Utah should have its own individual woodlot, a plat of ground, large or small—according to the needs of the owner—given over to the cultivation of trees for lumber, fuel, posts, etc., and material for wagon reaches, tongues, whiffletrees, plow-beams and the many occasional requirements of farm life. Time, on urgent occasions, and money, and vexation of spirit might be saved to the possessor of such a piece of woodland, and, in fact, when one considers the benefits to be derived from this source, the wonder grows that its establishment has been so long neglected.

But its need was not always so apparent. When the first settlers arrived, they located near foothills where easy access was had to extensive forests, which were cut down, wasted and burned without regard to the future. In time those primeval woods were exhausted, and when later colonists came and homesteaded the lower lands, they found it difficult and expensive to obtain lumber, posts and fuel for their necessities. And now has come the time when every farmstead must create its own woodlot, for only so can the owner's future wants be supplied.

Yet there are reasons other than those of utility, etc., for urging the individual planting of coppices and groves, the diversifying of the landscape, beautifying the home, and increasing its value; the formation of windbreaks and shelter-belts for the protection of crops and cattle, and the general amelioration of weather conditions on the farm, and beyond it, are among the benefits to be gained. In addition, the farmer has a pleasure resort for his family and friends, for the enjoyment of picnics, festival gatherings, etc., which alone would recompense him for the labor and expense. But above and beyond all, his supplies are close at hand; they can be obtained whenever necessary, and are being perpetually renewed.

Next to the importance of planting a woodlot is the question of its location on the farm. In eastern states where tree-planting is becoming popular, owing to the ever-increasing consumption of wood—greater today than ever before—this question is answered by planting on rocky knolls, steep hillsides or scanty soils, but in those states rainfall is abundant, and a tree, once planted, is almost sure to grow. In Utah, however, different conditions prevail, and trees planted, in such locations, without irrigation, would certainly die. Bottom lands, for some varieties of trees, unless subject to late spring and early autumn frosts, would not need irrigation after the trees were firmly established, but such lands are often more desirable for pasture and meadow purposes, and are not the best for general tree culture.

### Best None Too Good.

Considering the value of a good woodlot, and its necessity to the farm, it might as well be conceded that the best is none too good for it, and that it should be given, whenever practicable, the post of honor. Looking to its sheltering qualities—

horizontally to one vertically—it should be located against the prevailing winds, and at a point some 40 or 50 rods away from the home. Corners awkward to cultivate patches of irregular shape or contour, and narrow stretches of land along ditch and canal banks are ideal locations, provided the soil is good and water plentiful. Some varieties of trees thrive best when planted along fences and boundary lines, and, if so planted, the entire farm may be tree encircled. But these trees would not take the place of the woodlot, whose functions are more diversified.

Material for posts and poles is quickly provided by planting single rows here and there about the farm—say 40 to 50 rods long—with the trees two feet apart in the row. This permits sun and wind to accelerate their growth without crowding, a condition which retards development in a closely planted woodland. Yet some varieties profit by shade and close proximity, and the best poles and lumber are obtained from such conditions. From a 10-rod row of seedling Black Locusts planted nine years ago, the writer cut, last winter, 40 fine fence posts  $7\frac{1}{2}$  feet long, the butts ranging from 6 to 10 inches diameter, and none of the tops being less than four. The seedling had been planted one foot apart, and the removal of these posts changed but little the appearance of the row. Others are now available, and from the stumps of those removed, new growth to the height of eight feet has developed. This ensures a constant supply of posts for the future and a fine windbreak for the garden.

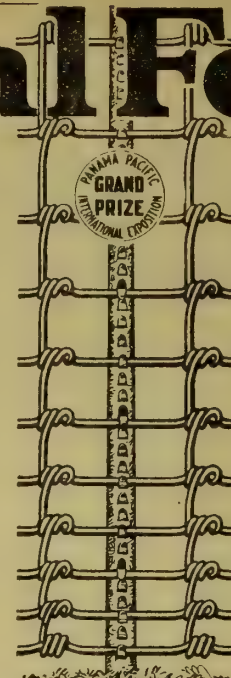
### Quick Fuel for Summer.

In growing quick fuel for summer purposes, such as the Popular family supplies, the single row plan is probably the best. The trees should be planted 15 to 20 feet apart, and given plenty of water. Varieties like the Carolina, the Norway, the Volga and Van Geerti Populars will make a growth of two feet diameter in 10 years, and attain a height and spread of 60 to 70 feet. In a tree of this size there is a great deal of light firewood, but, also, a robust root growth which ravages the soil for beyond its base and makes cultivation impossible.

It is claimed that of the lands within a state one-fourth should be maintained as forest, and that on private farms at least five per cent should be devoted to the wood lot. More than 75,000,000 feet B. M. of saw timber are produced annually from the woodlots of the United States, besides thousands of cords of firewood, and millions of posts and poles. But these results require a great deal of labor, for the growing of a crop of timber demands as much study and care as are given to the production of any other crops. One of the essentials, therefore, in securing a stand of trees, is to have the ground well broken and cultivated before planting. The trees should be set in rows from 4 to 6 feet apart each way and this is best accomplished by plowing furrows and setting the plants therein. Great care in obtaining straight rows is not necessary, and in fact, irregular lines,

# Royal Fence

**H**AS great strength and resiliency. Made of big, strong, stiff steel wire, with continuous stay wires from top to bottom wrapped around each horizontal wire and



Dealers Everywhere

securely held by the Royal loop.

## American Steel Fence Posts

Cheaper than wood and more durable—last a lifetime. Hold fence secure against all conditions.

### Sent Free

Write for booklet on how to set posts and erect fence. Every farm owner should have it.

## American Steel & Wire Company

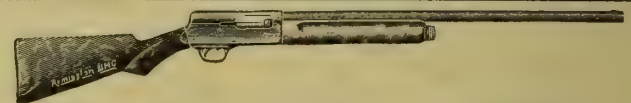
CHICAGO

NEW YORK

PITTSBURGH

CLEVELAND

DENVER



## GUN'S GUN'S GUN'S CHEAPER THAN SEARS-ROEBUCK

Get our Catalogue and see how you can save money. A postal will bring it by first mail.

Western Arms and Sporting Goods Company  
Salt Lake City, Utah.

Headquarters for everything in sporting good line.

## A GOOD FARM FOR SALE

Located at Elberta, Utah, on the D. and R. G. Branch line to Eureka.

Good market for all farm products. Only a short wagon haul to Tintic mines.

Just fifty acres in the piece.

The lowest price that any adjoining land has sold for in the last 5 years is \$125.00 per acre.

There is a good reason why I want to sell my land and in order to make a quick sale I offer it for \$75.00 per acre.

Some of the best sugar beet and alfalfa land in the state.

### EXTRA CHOICE IRRIGATED LAND

Rich, Black Loamy Soil

Water Rental \$1.00 an Acre Per Year When Used.

**W. C. Albertson**

603-4 Dooly Block

Salt Lake City, Utah

Mention the Utah Farmer went answering advertisements.



if the trees are kept equidistant from each other, present ultimately better landscape effects than the mathematically straight ones.

**Plant 1,000 a Day.**  
Two men, one with a shovel, the other with the trees, can plant by this method 1,000 trees a day. Something depends upon the size and kind of trees, but if the soil be properly prepared, the work is easily and rapidly done. If possible the ground should be cultivated the first year or two to keep down weeds, but after the second year this may not be necessary if the water courses are kept free. All stock should be strenuously barred from the plantation until the growth is 10 or 12 feet high, when, if plant growth becomes troublesome, one or two horses—not colts or horned stock—may be turned in to eat it off. Pruning will only be necessary to remove superfluous limbs, and keep the main stems pointing upwards.

**U. A. C. ROUND-UP.**  
The Agricultural College Glee Club made quite a hit in singing the following verses to the tune of the Old Oaken Bucket at the Round-Up. How dear to my heart is the U. A. C. Round-up.  
That changed my poor farm to a Real Estate show;  
The crops and the cattle all show the improvement,  
And E'en the old rooster's remodeled his crow.  
To U. A. C. Round-up, he crows, "A. C. Round-up."  
When new fangled notions make old things seem new;  
The pigs and the horses think life's set to music,  
Since things on the farm have a new point of view.

How dear to my wife is the House-keeper's Conference,  
Where dressing and cooking are equal in style.  
And down on the farm all the old common victuals,  
Are fixed in a way that will make a man smile.  
With puddings and sauces and cakes most delicious,  
She travels the road to my heart every day;  
With the house and the farm on the new science basis  
I am sure to grow wealthy, and never turn gray.

**REFRAIN.**  
Then here's to the health of the U. A. C. Roundup,  
And life on the Farm, from a new point of view,  
Then here's to the health of the U. A. C. Round-up,  
That makes me grow wealthy and never grow gray.

**ONE ON CASEY**  
Clancy was chuckling.  
"What's the joke?" asked Mooney.  
"Why, Casey just bet me ten dollars he could shoot a peanut off me head with a shotgun."  
"What's funny about that?"  
"I took him up because I know he'll miss it."

**SUSPICIOUS**  
Mrs. Bilton—I think you're the dearest, sweetest man that ever was!  
Bilton (suspiciously)—Were you at some millinery opening today?  
— Judge.



THIS  
**AMERICAN  
QUEEN**  
COLLECTION OF THE  
MOST BEAUTIFUL  
**ROSES**  
**FREE**

To All Readers of  
**Utah  
Farmer**

**WE BELIEVE** in beautifying our homes and surroundings so that they will be a pleasant place to live. Nothing adds more to the beautifying of the Farm Home than fragrant flowers and the Rose is Queen of Flowers. Here's a Wonderful Bargain Offer we have been able to obtain for our friends—and that's you.



**8**

**Hardy Ever-Blooming Roses**  
**The Kind That Grow and Bloom**

To each reader of the Utah Farmer, we want to deliver this collection of eight hardy ever-blooming rose bushes. Every lover of beautiful flowers should send us their order at once as these roses are the kind that bloom every month of the growing season, producing great masses of large double flowers from early spring until late fall. They possess all the good qualities of vigorous growth, delicious fragrance, beautiful color and fascinating form.  
We enclose with each collection special printed instructions on the planting and care of roses and guarantee them to reach you in healthy growing condition. We will deliver them at the proper time to plant in your garden.

This choice collection of Roses consist of such beautiful varieties as Etoile De France, My Maryland, Bessie Brown, Etoile De Lyon, Helen Gould Gruss Teplitz, Ulrich Brunner, La France, Kaiserin Augusta Victoria. A choice variety of colors and some of the finest roses grown.

**Our Splendid Offer**

Send us \$1.00 for a years subscription to the Utah Farmer and we will deliver the entire collection of eight Hardy Ever-Blooming Roses to your post office address positively free. Don't delay but send your order today so that we can send them to you in good time for planting.  
Any old subscriber can take advantage of this offer by paying one year in advance. If you are paid in advance and want this beautiful collection of roses send us one dollar and we will send roses and have time of your subscription extended accordingly.  
Send today for this beautiful collection of ever-blooming roses to the **UTAH FARMER, Lehi, Utah.**



# \$615

Model 75—Roadster \$595—f. o. b. Toledo

## Never Before Such

From every state in the Union we hear of the amazing success of the latest Overland—the \$615 model.

At the New York and Chicago Automobile Shows—the two great national automobile events of the year—the \$615 Overland was the most widely discussed model exhibited.

And why not? An electrically started and electrically lighted completely equipped Overland with four inch tires for only \$615!

Is there any wonder this car took the whole country by storm;

Season after season for seven years we have experienced one great success after another.

But this one tops them all.

No other achievement in the history of the entire industry parallels this record.

It stands out alone — boldly — conspicuously — unapproached.

Never before has an automobile success been so rapid, so definite and so sweeping.

The \$615

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*Overland*  
TRADE MARK REG.

## An Instantaneous Success

Overland has made history. It marks the entrance of a new automobile value—a car complete in every way of the term at a price which was hitherto thought impossible.

—a powerful five-passenger touring car complete for \$615.

and "complete."

electric starter and electric lights, electric horn, electric speedometer—in fact, every necessary. Nothing is lacking. There are no "extras" to

the motor is the very latest en bloc design—the best in fine engineering.

Note that the tires are four-inch size. This is a big advantage. Many cars costing more have smaller tires.

The rear springs are the famous cantilever type. Another advantage. Cantilever springs mean the best in riding comfort.

Write on request. Please address Dept. 646.

**Willys-Overland Company, Toledo, Ohio**

"Made in U. S. A."

Note the headlight dimmers—the electric control buttons on steering column—demountable rims and oneman top. These are all big advantages.

This newest Overland is light in weight, easy to handle and very economical to operate.

It's just the car the world has been waiting for.

It is large enough for the whole family—moderately priced, within the reach of the majority—economical to maintain—built of the best quality materials—snappy, stylish and speedy—and complete in every sense.

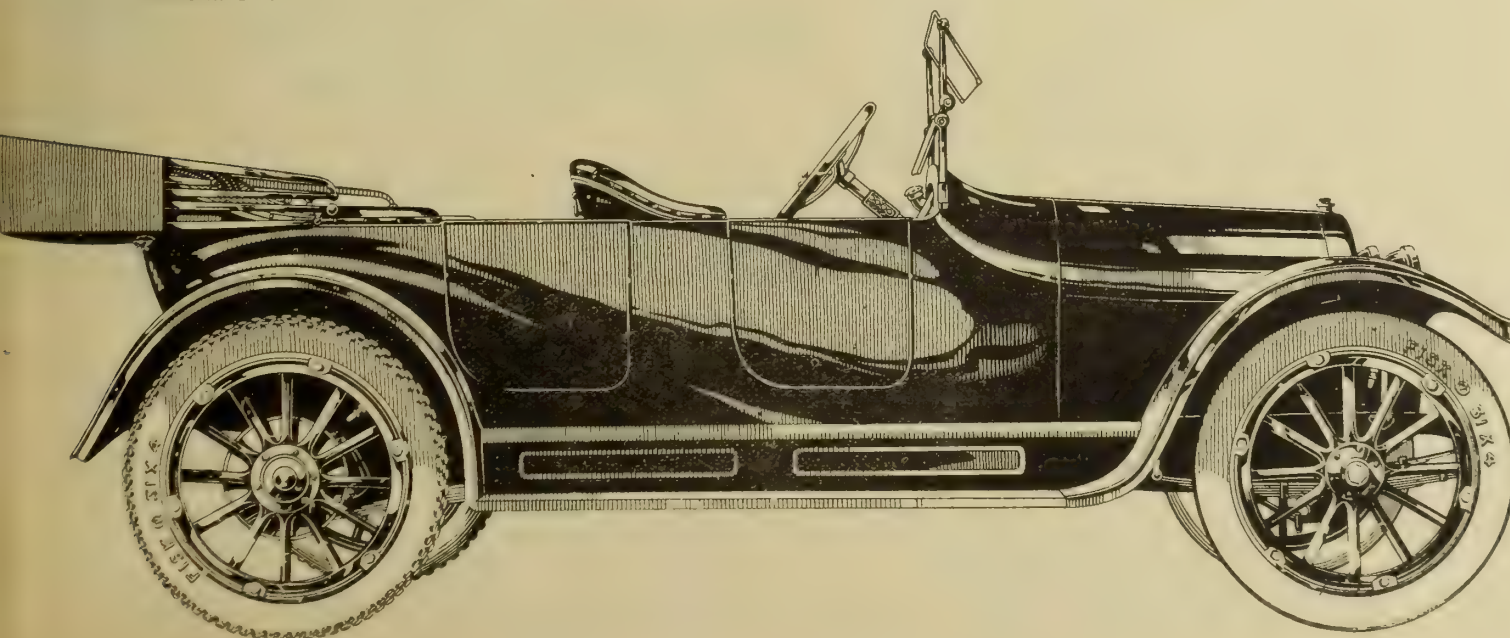
In short, it is just another striking example of how our larger production enables us to build a bigger and better car and still keep the price within reason.

You'll want one, so order it now.

Don't wait, debate or argue with yourself. See the Overland dealer and place your order immediately.

Then in a few days you and your whole family will be driving your own car.

Remember it comes complete—only \$615!





## POULTRY

### POULTRY.

#### Hints for Hatching Season. Get Good Stock.

Select good, vigorous breeding stock, pure breeds if possible. Thrift or vitality is essential to success in poultry breeding.

Use old stock for breeders. Hens in their second and third laying seasons make the best breeders. Early cockerels may be used with good results. If pullets must be used, mate with old cocks, never with cockerels. Get the hatching done early. March and early April chick are best. Early hatched pullets will make winter layers.

Set large, well shaped, uniform eggs. A small egg means a small chick.

#### Select Clean Eggs.

A healthy hen fed on clean food, lays an egg one hundred per cent pure, which, if fertile and incubated under favorable conditions, will hatch a perfect chick. Many good eggs, however, are so exposed to filth that they never have a chance to produce anything. Many produce weak chicks unable to live. Eggs intended for hatching should be gathered often and kept in a clean, cool place. A pantry where foods are kept is not a suitable place.

#### Set Fresh Eggs.

Eggs should be placed in incubation by the time they are ten days old. Eggs may hatch that are older and results may be good, but the fresher eggs are better.

#### Some Causes of Infertility:

1. Immature or extremely aged breeders—the former the more common cause.
2. Saving eggs for hatching too soon after mating.
3. Breeding stock low in vitality.
4. Over fat breeders.
5. Insufficient exercise.
6. Lack of green food.
7. Insufficient animal protein.
8. Too many females to a male.
9. Unsuitable environment.

#### Causes of Apparent Infertility or Dead Germs:

1. Eggs laid in filthy nests.
2. Careless gathering of eggs.
3. Keeping eggs too long before incubation.
4. Insufficient turning.
5. Eggs kept in unsuitable places.
6. Keeping eggs at too high a temperature.—Pren Moore, Poultry Husbandman.

#### CARE OF EGGS FOR HATCHING

Eggs are often spoiled by careless handling. This is particularly true of eggs which have been shipped. A thoughtless person will unpack the eggs at once and place them in the nest or incubator. Some will even go so far as to shake the eggs, "just to see if they will rattle." As a matter of fact, when the air is excluded for a certain length of time, an egg that is perfectly good will rattle a little, but we would not advise this method of testing. It is too expensive.

When saving eggs from your own flock, be careful not to let them get chilled, and never allow any one with soiled hands to gather the eggs. A very little grease or oil on the shell of an egg will render it worthless so far as hatching is concerned. If an egg has become soiled in the nest, it

may be washed in clear tepid water. Never use soap or alkali of any description for such purpose.

We like to set eggs the same day they are laid, but sometimes it is not convenient to do so. If eggs are to be kept for a week or over, they should be given special care in order to insure a good hatch. They are placed in boxes and turned carefully every day until placed for hatching.

The temperature should be neither too high nor too low. A damp cellar is a poor place to keep eggs. They should never be kept near a fire.

If eggs are properly cared for they will hatch almost as well when two weeks old as fresh eggs, that is, if they are good for hatching purposes in the start.

We find that the eggs of some fowls will keep in hatchable condition longer than others. Hen's eggs will not hatch well, as a rule, when they are over two weeks old. We have kept them 21 days with good results, but it is hardly safe to take chances.

Turkey eggs and goose eggs will keep perfectly for 21 days and even a little longer. They should not be allowed to become chilled in the nest, however.

Both turkeys and geese begin laying very early in the season and unless they are closely watched their eggs will get chilled, owing to the fact that they nearly always make their nests on the ground.

It is the same with ducks, also. But duck eggs should not be over a week old when placed for hatching. After a Pekin duck egg is ten days old it will not hatch, no matter how well it has been cared for. Duck eggs should never be shipped during very warm weather. In fact, it is not a good plan to ship any kind of eggs in warm weather, but duck eggs suffer more from the effects of rough handling than other eggs, because the albumen is so much thinner. It is best to procure duck eggs for hatching near home.—Indiana Farmer.

#### RULES IN BREEDING POULTRY

"Breed only from stock of high vitality which has never been seriously sick with any disease.

"Breed from mature males and females.

"Breed from birds as near ideal in shape and color as possible. A good all-round bird is better to use as a breeder than a bird exceptionally good in one point and exceptionally poor in others.

"Let the male be exceptionally strong in points where the female is weakest, and vice versa.

"Instead of buying ten males at one dollar each, and thus getting very ordinary males to head your flock, it is much better to get one good male at \$10 and mate him in a separate pen to ten or twelve of your very choicest females.

"The condition of the parent stock is largely, in fact almost wholly, responsible for the condition of the baby chicks. A chick well born is half raised.

"Good strong, vigorous males and females, properly mated, will store so much vitality in the eggs that the embryo can stand a lot of abuse in incubation, and the baby chick will overcome and outlive many of our



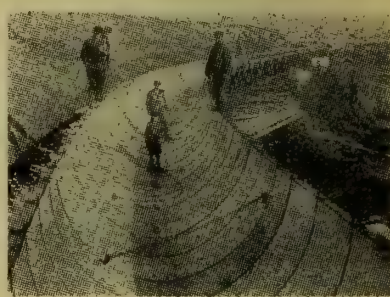
## HEWLETT'S LUNETTA BAKING POWDER

25 CENTS the Pound, why pay more?

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mistakes in faulty breeding and improper feeding."—Farm and Fireside.

#### WHAT IS WAS

Six-year-old returned from his first day at Sunday School, very proud that

he had learned the song that the children sang as they marched into the assembly room.

"What was the song?" asked fond parent of orthodox persuasion. "Onward, Christian Science!"



## DOES EDUCATION FOR FARMERS PAY?

"The better educated farmers keep about one and one-sixth times as much stock as the others, as is shown by the number of acres of crops grown for each animal unit kept." "The man with more school training also handles more crops with each workman he employs. Each workman on farms of the first group of farms handles 53.5 acres of crops, while a workman in the second group of farms handles 61.2 acres. In other words, the better-educated man is doing about one and one-fifth times as much as the man with less school training.

Such is the opinion of O. R. Johnson of the Missouri College of Agriculture and this information was secured from a farm survey conducted by the college.

"There are several points which the data brings out. The one of greatest interest, perhaps, is that the better educated farmer is making an income 71.4 per cent greater than the man with less education. After the labor income of the man with less school training is adjusted to allow for difference in size of business, the man with more education still has about 40 per cent greater income than the man of the first group. The other factors indicate strongly that the better educated man has his business better organized. The fact that he gets slightly better yields and has a system which furnishes him more productive labor, and that he keeps more live stock, seem to show that he has somewhat greater ability in the organization and handling of his business. Because of this fact it is found that he makes enough larger labor income to pay interest on approximately \$5500 capital, and allowing for the difference in size of business he still makes enough larger income to pay interest on \$3700.

"Other studies have shown that with this size of farm each acre that the farm is increased will add approximately \$2 to the labor income, but that the investment per acre on the two farms is not enough different to make any difference in the income in favor of the better educated man. Also, the difference in crop yields is not great enough to change the labor income materially. With these facts considered, it would appear as though the man who has received more mental training has increased his efficiency thereby to the extent of making interest on a capital of at least \$3700. This does not seem to be a bad investment for the small amount of time he spends in getting the additional training and the

probable expense of obtaining this training. While other factors may have played some part in his greater earning capacity, yet from a careful study of the organization of his business, it appears that education must have played a very large part in his greater earning ability."

## WHEN TO PRUNE

### ORNAMENTAL PLANTS

A little early care given to the pruning of ornamental trees and shrubs during the early part of March will do much to control their growing and flowering habits, and enable the home owner to have well-formed plants and well-trained hedges or boundary planting. The pruning of ornamental trees and shrubs is, in fact, one of the first duties that may profitably be performed in the home garden. The amateur, however, should not make a ruthless assault with shears or pruning knife upon everything in his yard. Flowering trees and shrubs that bloom in the spring or early summer should not receive radical pruning at this time, according to the garden specialists of the United States Department of Agriculture. Of course, if on these plants there are dead or weak branches, these should be taken out, and any crossing limbs that are rubbing and seriously interfering with the growth of the bush should be removed. The tips of the limbs, however, should not be cut off nor should any young wood that does not interfere with the growth of the bush be removed. It must be borne in mind that the blossom buds for this year's flowering were formed last year, and every shoot removed takes off that much of the prospective blossoms.

Trees and shrubs that bear their flowers in midsummer and which were not pruned in the fall may be pruned at this time. Plants of this sort are the Rose of Sharon and the shrubby hydrangea. Where the largest possible mass effect is desired, these plants should be pruned but little. If the aim is to secure the largest possible trusses or blossom heads, last year's growth should be pruned back to two or three eyes to a stem. Such severe pruning, however, is not conducive to the most attractive development of shrubs.

Climbing roses should not be pruned at this time except for the removal of surplus or interfering branches. Every bit of wood removed now reduces the amount of bloom the plant will bear during the coming season. Roses used in border planting should be treated in exactly the same way as other shrubs, except that many of these species will be improved by having all their old wood cut away once in every five or six years. This would mean cutting all the old canes off within three or four inches of the ground and forcing the bush to throw up entirely new wood.

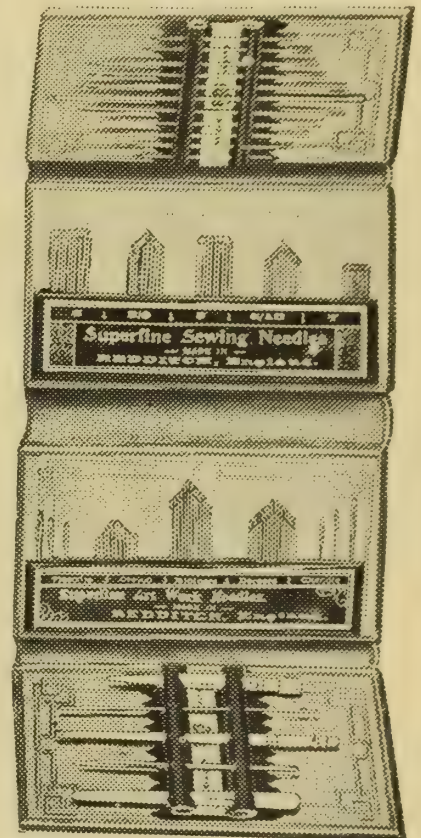
Roses used for cut flowers, like the hybrid perpetuals, the hybrid teas, and teas, should be severely pruned. The hybrid perpetuals may be cut as soon as freezing weather is past. Pruning of the hybrid teas and teas, however, should be left until the young growth has started. In both cases the plant should be cut to within six inches or one foot of the ground. Four or six eyes to a stem is about the proper amount of wood to leave.

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## PUMPING WATER

I have a well 500 feet deep from which I pump water with a Sampson wind-mill. This water is pumped into a large receiving basin, sufficient in size to hold water for several hours for cattle and culinary purposes. Occasionally there will be a lull in the weather and the wind-mill fails to do its work. Should I buy a Ford car would it be possible to use this engine in such times of emergency to lift the water from the well?

Answered by Professor Humphreys. There are a number of cases in

which small automobiles including the Ford have been used for stationary purposes for such work as sawing wood, pumping water and grinding grain. The Ford car could be used for the work of which you speak. It will be necessary to "jack" the rear end of the car off from the ground and place it on a rigid platform, detach one of the rear tires and belt from the wheel to a pulley on the pump. It will be necessary to attach a pulley to the pump if there is not one already provided. By the same method other stationary work of a light character can be done.



# Treatment of The Soil

Prof. J. C. Hogenson.

## Agricultural Lesson.

Success in Dry Farming depends upon the proper treatment of the soil, rather than a particular kind of soil. The treatment should be of such a nature as to have the greatest tendency to conserve the moisture which falls upon it. The first operation is plowing.

Jethro Tull said, nearly two hundred years ago. "Tillage is manure." and stirring the soil is the one fundamental labor of agriculture. The object of plowing is to pulverize the soil making it possible to prepare a good deep seed bed for the reception of the various farm seeds, and also to loosen up the soil so that it will retain more water. It does this by fining the soil which renders it possible for more capillary and free water to be held. If then the plowing is not properly done, an adequate water reservoir will not be formed in which to store rain and snow and as a consequence much of it will run off from the surface of the ground and be lost instead of sinking into the soil.

To show that the plowing of land has a tendency to increase its water holding power, samples of soil were taken to a depth of five feet on two adjacent fields, one of which had never been plowed, the other having been cultivated for a number of years and from which a crop had just been removed. Notwithstanding this fact, there was still more than fifty-five tons per acre more water in the ground which had been plowed and cropped. (Bul. 91, Utah).

Many farmers have observed that on dry farm lands, better yields are secured if the land be plowed in the fall. The precipitation in this section of the country is never large enough to over saturate the soil so that if the land be plowed in the fall and the surface left uneven the penetration of moisture is more easily affected and more water is held. On July 19th samples of soil were taken from adjacent pieces of land in the same field, one of which had been plowed in the fall and the other in the spring with the following results as to moisture content:

Inches	Fall Plowed %	Spring Plowed %	Difference.
0-12	18.07	18.47	0.42
12-24	24.69	20.41	4.28
24-36	22.18	19.55	2.63
36-48	33.90	23.24	10.66
48-60	40.90	29.28	11.62

Total water  
in inches. 23.00 18.54 4.46  
The difference which this table

shows in favor of fall plowing amounts to more than 506 tons of water to the acre in the first five feet of soil. The greatest difference is in the fourth and fifth foot. This is desirable because it is less likely to be evaporated from this point than if four nearer the surface. The Minnesota Experiment Station states that a wheat plant sixty-three days old about two feet high and ready to head out had roots which had penetrated to the depth of more than four feet. The depth to which roots will penetrate depends largely upon the character of the soil, the amount of water which it holds and the treatment which it has received, the depth to which it has been plowed, etc. Early in October samples were taken to the depth of ten feet from the same field near the places where the samples were taken in July, with the result that the fall plowed land contained 53.34 in. spring plowed land 46.87 in. with a difference of 6.47 in.

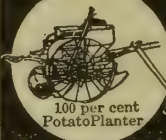
Plowing in the fall is a little more expensive than spring plowing because it is more difficult. The amount of moisture saved and the increased yield more than compensates for this. In the fall, too, work is not so pressing as it is in the springtime, so that the farmer will have a chance to distribute his work more evenly over the year. The action of freezing and thawing during the winter has a tendency to improve the texture of the soil, making it finer and more friable.

Plowing, if done in the spring, should be commenced as soon as it is possible to get onto the land, and should be a little more shallow than fall plowing because the moisture you desire to conserve is already in the soil and should not be disturbed to any great depth. A disc or harrow should follow the plow because if the large uneven surface left by the plow remains exposed to the air for only a few hours large quantities of moisture will be evaporated. Success often lies in the proper performance of the right time of these seemingly insignificant operations.

Good plowing whether fall or spring, gives a clean cut furrow on side and bottom. It turns the inverted furrow slice upon edge in a moderately well pulverized condition. A disc plow will often leave the soil in a good condition for the harrow when the ground is too hard for a mold board plow to do satisfactory work. The drier the ground the more narrow should be the furrow.

The general opinion among farmers is that deep plowing is much more effective than shallow plowing. The favorite depth is from eight to ten inches. On some large dry farms the practice of subsoiling about twenty inches deep is followed with good results one year in three. Most farmers, however, think it doubtful if this method has proved helpful enough to warrant the extra expense. Deep plowing is beneficial because it increases the water holding capacity of the soil and retains not only what water is added to it from above but also some from the deeper layers gained through capillary action.

To show that subsoiling does have a tendency to increase the water supply and hence, also, the crop, has



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been shown by experiments on ten plats. All were plowed ten inches deep and five of them were subsoiled 8½ inches deeper, the resulting crops were, for the subsoiled plats 18.96 bushels, and for the plats not subsoiled 17.25 bushels, making a difference of 1.71 bushels in favor of the subsoiled plats. It is interesting to note the difference in the percentage of moisture in these same plats at different periods during the growth of the crop.

Time	Subsoiled Depth of 30 in.	Not subsoiled 30 in.	Differ- ence.
Nov. 18	14.48	14.35	x.13
May 8	20.75	20.11	x.64
June 3	9.59	8.66	x.93
June 19	5.94	5.99	— .05
July 10	4.66	5.32	— .66
July 17	3.92	4.90	— .98

It will be seen that at the time of seeding they both contained about the same percents of water. On May 8th, the subsoiled plats contained more water than those not subsoiled. On June 3rd the difference was still greater. On June 19th the more rapid growth of the crop on the subsoiled plats had reduced the moisture content so that there was practically no difference. At this time the crop was past its active growing period and its main work was that of ripening the seeds. From this time on the amount of water in the subsoiled plats became less than those not subsoiled. This may be accounted for when it is remembered that subsoiling loosens the lower layers of the soil so that the plant roots and air can penetrate them more easily and thus use up the moisture stored there more completely. It is claimed by some that when the subsoil is loose and gravelly no benefits will result from subsoiling, when these soils are subsoiled it is claimed that they lose a great deal of moisture which really passes through them.

In many places in Utah there appears to be very little difference in the fertility of the soil and the subsoil, hence there is little danger of plowing too deep. In places where the soil is but shallow and the subsoil infertile it is not wise to plow so deep as to bring to the surface much of the poor subsoil as this will greatly lessen the yield of crops grown upon them. It is well to deepen the plowing on these soils gradually so as to bring to the surface each year a little new soil for the weather and sun to act upon. In this way the soil will be gradually deepened without materially affecting the yields. Bulletin of the Utah Station number 100 says, That deep plowing and subsoiling for every dry farm section of the state, and for every season is not always conducive to the best results, is borne out by the results reported by reliable and experienced dry farmers of Utah. We believe from the data now collected that the depth to which one should plow will be governed by the following conditions:—1st the amount of moisture that falls; 2nd, the time of year at which it falls, and 3rd, the character of the soil and subsoil. These conditions vary so widely from year to year within the same section of the state, as well as between different sections, that it would be going beyond our knowledge to say that deep plowing is in all cases indispensable to best results in dry farming.

#### SCATTER MANURE EARLY.

M. F. Miller, Missouri A. C.

All available manure should be scattered evenly over the fields before spring work is likely to begin. It is always best to scatter it before it has had time to lose any of its plant food by lying in the rain or by fermenting, and it is especially easy to do this in the winter time when the other work is not so pressing. Even scattering is much more important than most people realize.

Greater returns per ton are secured by light evenly scattered applications over a large area instead of heavy irregular scattering over a smaller acreage. For this reason, the spreader will soon pay for itself on farms of one hundred acres or more simply by increasing the returns per ton from the manure, to say nothing of the saving in labor.

If possible, it is better to use the spreader because (1) it saves work, (2) it makes it more likely the manure will be saved and scattered promptly, and (3) most important of all, it makes possible the even scattering which is so desirable if the full value of its plant food is to

be secured at this time of the high cost of commercial fertilizers.

The loss is not very great if stock is fed in barns, sheds, or lots and the manure hauled every day or even every week. If this plan cannot be followed, the stock may be fed in an open shed and the manure allowed to accumulate on the floor where it will be tramped down and kept compact and moist enough to prevent fire fang-ing or rapid fermentation. Even in the open shed, a great deal of the fertilizing value will be lost through leaching into the ground unless the floor is of concrete or similar material. Entirely aside from the fact that it helps to insure a dry sleeping or feeding place, the concrete floor helps to pay for itself by the saving of manure which results.

Probably the least possible loss in manurial value results if the animals can be allowed to run upon the fields which need the applications. If the feed lot is located on a hill side, the value of the manure may be largely lost through washing, but if it is located on more level ground and moved from time to time, better results will be obtained. Fields that are too far from the barn or feeding

headquarters can hardly be handled in this way, and long winters or continued bad weather make it much more difficult, but if the ground remains frozen so that it is not injured by tramping and the weather is not too severe, it is usually possible to take advantage of this plan and every effort should be made to conserve the valuable soil fertility in barnyard manure.

Daddy—No, yer mother never drest the way you girls do today to catch a husband.

Daughter—Yes—and look at what she caught.—Wroe's Writings.

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The average farm implement is only half worn out by use alone. The rest of the wear is due to rust and decay.

Acres count in the life of a machine—not years.

These are some of the striking facts about machinery emphasized by a recent study conducted by the U. S. Department of Agriculture.

It was found that the cost per acre covered is the real measure of the value of the service given by an implement, and that, on the average, the more acres covered per year, the more profitable it proves to its owner. For example, it was found that for the territory of Western New York surveyed, the mower that covers but 14 acres per year cost its owner 36 cents per acre, while the mower that covers 53 acres annually cost but 10 cents per acre cut.

Of the implements studied, the walking plow shows the longest life in days of service, 224 days out of a total life of 12 years, while the two-row corn planter shows the shortest life in days of service, 9 days out of 11 years, or about nine-tenths of a day per year. The cost of the walking plow was less than ten cents per acre, mostly for repairs, while the cost of the two-row corn planter was 80 cents per acre, mostly 'replacement cost'—or the amount charged against the implement each year toward getting a new one when it is scrapped.

The relation between acres covered

per year and the cost per acre is brought out strikingly in the following table, which embodies a summary of the more important facts brought out by this study. It should be borne in mind in referring to this table that the averages shown are based on data collected from a specific territory of western New York, where the land is rolling and soil rather heavy. In applying the figures in other localities due allowance should be made for local conditions.

### SUMMARY SHOWING AVERAGE SERVICE RENDERED BY 18 KINDS OF FARM IMPLEMENTS IN WESTERN NEW YORK, AND AVERAGE MACHINERY COST PER ACRE.

Implement.	Life of implement			Acres Covered.	Cost per acre covered.					
	Average days work per year.	Days of work.	Years.		Per year.	Total.	Replace- ment.	Interest.	Repairs.	Total.
Walking plow	19.2	224	11.7	32.9	284.9	\$.026	\$.010	\$.062	\$.098	\$10.00
Sulky plow	14.7	119	8.1	30.9	250.3	.170	.046	.069	.285	42.50
Spring-tooth harrow	6.6	73	11.0	71.1	782.1	.023	.007	.011	.041	17.50
Spike-tooth harrow	3.1	43	14.0	48.3	676.2	.016	.007	.007	.030	10.50
Disk harrow	4.2	54	13.0	35.2	457.6	.059	.025	.014	.098	27.00
Land roller	4.7	75	16.0	65.9	1,054.4	.023	.011	.007	.041	24.00
Grain drill	4.6	76	16.4	46.3	759.3	.095	.049	.027	.171	72.00
Corn planter, 1-row	.9	10	11.7	4.1	48.0	.250	.111	.170	.531	12.00
Corn planter, 2-row	.8	9	11.0	8.2	91.3	.440	.158	.200	.798	40.00
Cultivator, 1-row	4.1	58	14.0	16.9	236.6	.027	.012	.021	.060	6.50
Cultivator, 2-row	5.6	70	12.5	39.3	491.3	.065	.027	.025	.117	32.00
Cabbage transplanter	3.4	43	12.8	12.5	160.0	.280	.114	.091	.485	45.00
Mower	3.1	46	14.8	28.0	414.4	.099	.047	.065	.211	41.00
Hay rake	2.6	37	14.5	43.0	623.5	.038	.019	.008	.065	24.00
Hay tedder	1.5	21	14.0	21.6	302.4	.112	.051	.019	.182	34.00
Bean harvester	2.3	29	12.9	16.9	218.0	.115	.048	.060	.223	25.00
Grain binder	3.4	53	15.4	35.2	542.1	.231	.113	.058	.402	125.00
Corn binder	3.7	40	10.8	21.1	227.9	.550	.194	.096	.840	125.00

### HOW TO AVOID LOSING YOUR MONEY.

Excellent suggestions on thrift are issued by the American Bankers association, in weekly letters to the press.

With the coming of prosperity, there is a warning against the promoter who promises great wealth on small investment. When an offer is too roseate, consider it more carefully than if the returns are within a legitimate margin of profit. Here is a suggestion:

The really big things are not

hawked about the streets like vegetables. The big deals are not for the "dear public." Henry Ford never offered his stock broadcast. A certain New York undertaker, now bankrupt, did. Standard Oil never went with hat in hand, seeking those who would buy. Big things are for the few; little things for the many.

Harry Lauder, who has saved, though in the company of spend-thrifts, has a few homely maxims:

Behave toward your purse as you would to your best friend.

View the reckless spending of

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Reduces Bursal Enlargements, Thickened, Swollen Tissues, Curbs, Filled Tendons, Soreness from Bruises or Strains; stops Spavin Lameness, allays pain. Does not blister, remove the hair or lay up the horse. \$2.00 a bottle at druggists or delivered. Book 1 M free.

ABSORBINE, JR., for mankind—an antiseptic liniment for bruises, cuts, wounds, strains, painful, swollen veins or glands. It heals and soothes. \$1.00 a bottle at druggists or postpaid. Will tell you more if you write. Made in the U. S. A. by W. F. YOUNG, P.D.F., 142 Temple St., Springfield, Mass.

## EAR PERFECT

## TAGS



Samples Free  
ATTACHED INSTANTANEOUSLY  
Name and Address. Numbered if Desired.  
LEG BANDS for Poultry, Pigeons, Turkeys  
SALT LAKE STAMP CO. Salt Lake, Utah.

## Caught 51 Rats One Week

Trap resets itself, 22 inches high, will last for years, can't get out of order, weighs seven pounds, 12 rats caught one day. Cheese is used, doing away with poisons. This trap does its work, never fails, and is always ready for the next rat. When rats and mice pass device, they die. Rats are disease carriers and cause fires. Rat Catcher sent prepaid on receipt of \$3. Mouse Catcher, 10 inches high, \$1. Money back if not satisfied. One of these rat catchers should be in every school building.

## H. D. SWARTS

Inventor and Manufacturer  
UNIVERSAL RAT and MOUSE TRAP  
Box 566, SCRANTON, PA.

money as criminal and shun the company of the reckless spender.

Dress neatly, but not lavishly. A bank pays a higher rate of interest than your back.

Take your amusements judiciously. You will enjoy them better.

(Continued on page 23)



# THE FARMERS' MARKET PLACE

**For the Buyer**

This market place offers our subscribers and readers a very good place to advertise. If you have something to sell or want to buy here is the place to tell it. These advertisements are read because they offer bargains, your bargain should be here. Take advantage of this opportunity today.

**For the Seller**

## Gem Herd of Improved Chester White Swine.

This Herd Bred, Raised and Sold. Both Boar and Sow Grand Champions of the World's Fair held at Frisco this last year. Both Sire and Dam, is still in the herd. If such breeding interests you, write for illustrated catalogue. Stock of all ages for sale at all times.

Address

**GEO. H. LAWSHE**  
Falls City Idaho

### FOR SALE

Foundation Stock in Holstein, Friesian's and Duroc Jerseys. Will exchange a few for hay or grain. For breeding and particulars write  
**JOHN W. STUBBS**  
R. D. No. 2. Provo, Utah.

## Percheron Stallion

An unusual opportunity to purchase a good stallion. Foaled June 1913. Utah bred. Sire imported Damocles. Very large and finely developed. Direct all inquiries to B. T., Utah Farmer, Lehi, Utah.

## Holsteins For Sale

Cherry Creek Dairy Farm offers Registered Cows, Bulls and Heifers. Sons and daughters of Rag Apple Korndyke 13th. Grand champion Utah State Fair 1915. Sire Rag Apple Korndyke. Dam, Fairview Mabel Korndyke A. R. O. record 25.51 pounds butter in seven days fat 4.83 per cent as a Jr. three years old. We offer 10 choice heifers age 2 months to one year for \$1000.00. A bargain for some one. Bulls from \$75.00 to \$150.00. Including a choice Bull calf 5 months old from Lady Netherland, 1st prize. Also 1st in milk and butter fat contest Cache County and Utah State Fair.

**NELSON BROS. Props.**

Richmond

Utah

### FOR SALE

Registered Holstein Bull  
A prize winner.  
Address

**DALLAS HOLLEY**

Phone 213-J-2

Mapleton, Utah.

**HOUSE AND BARN PLAN BOOK FREE**—Gives direct from-mill prices on many designs. Send us your carpenter's bill for quick estimate. Western Lumber and Millwork Company, Tacoma, Washington.

## 13 HOME BRED

### Registered Percheron Stallions

Buy home bred, climated stallions as cheap as horses of the same quality can be bought in the east.

Also offer for sale a few head of registered Percheron mares.

Also have for sale 300 choice registered Rambouillet Rams and 300 registered Rambouillet yearling ewes.

**ACME STOCK FARMS**

**W. S. HANSON, Prop.**

Collinston

Utah

IF YOU WANT  
A BARGAIN  
"SEE ME."

160 acres improved ranch in Idaho, half under cultivation water right, a big snap at \$2250, half cash.

640 acres good land in Rich county, water right, 60 acres in hay, fine for hay, grain and ideal stock proposition. Take it for less than half what it is worth, \$15 per acre. Easy terms, or might take city property.

4400-acre cattle and stock ranch in Montana, good land, fine range, \$25 per acre, terms.

840 acre, extra good stock ranch, independent water right, large free range, all kinds implements, 5000 bu. oats, lot of cattle, horses and hogs go with place, only \$35,000, terms, or might take city property at cash value.

**GEO. W. DANLEY**

Was. 2989. 707 Walker Bank Bldg.  
**SALT LAKE CITY**

## Money to Loan

On improved farms with primary water rights, at reasonable rates."

**INTER-MOUNTAIN LIFE  
INSURANCE CO.**

11th Floor Boston, Bldg.

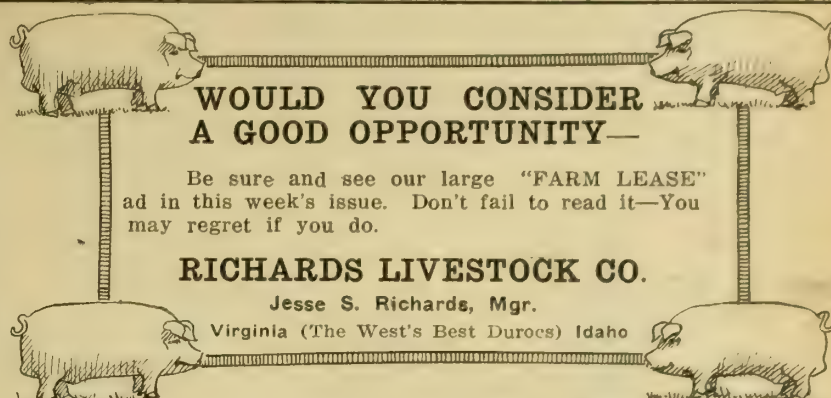
**Salt Lake City, Utah.**

### WE MAKE

Farm and Ranch Loans  
in Utah, Idaho,  
Wyoming, Oregon and  
Colorado.

**MILLER & VIELE**

803-7 Kearns Bldg.  
**Salt Lake City.**



**WOULD YOU CONSIDER  
A GOOD OPPORTUNITY—**

Be sure and see our large "FARM LEASE" ad in this week's issue. Don't fail to read it—You may regret if you do.

**RICHARDS LIVESTOCK CO.**  
Jesse S. Richards, Mgr.  
Virginia (The West's Best Durocs) Idaho

**BABY CHICKS & HATCHING EGGS**  
White Leghorns, Brown Leghorns, Barred Rocks, R. I. Reds, Black Minorcas, Anconas, Buff and White Orphingtons. Prices on application.

**THE ORLAND HATCHERY**  
Orland, Glenn Co. California

**4—BEST LAYING STRAINS—4**  
Rose Comb Rhode Island Reds and White Wyandottes, Single Comb Black Minorcas and White Leghorns. Egg fertility and stock guaranteed. Write your wants. E. C. Blanpied, Box 60, Milford Utah.

### DAY OLD CHICKS

From our own White Leghorns and R. I. Reds, selected as layers from stock "bred to lay" for 4 generations. Also eggs for hatching. Book orders now. Bates and Sons, Provo—R. F. D. 1—Box 310. Breeders of Airdale Dogs—puppies for sale now. Write us.

### BABY CHICKS

Single Comb White Leghorns. The kind that pay for five or six years. Especially bred for long profitable service. Send for booklet. Early orders insure your wants.

### MOUND VIEW FARM

R. D. No. 2 Brigham, Utah

### EGG MACHINES.

Our Leghorns are truly worthy of the name. Hardy Laying Paying Strains. We are offering the biggest chick bargain of the season—try us and be convinced. Ask for circular. **MANTI MAMMOTH HATCHERY CO.** Manti, Utah.

**SALESMEN WANTED.**—Everywhere to sell our complete line of nursery stock. Donald Nursery Co. Donald, Oregon.

## TURKEYS AND CHICKENS

Two choice bronze gobblers \$5.00 and \$7.50 each.  
White Leghorns, Plymouth Rocks, Rhode Island Reds, male and females. 1000 baby chicks—all kinds.

**Vogeler Seed Co.**  
Salt Lake City, Utah.

Send in your order for Butter Wrappers today.

## HOW TO AVOID LOSING YOUR MONEY

(Continued from page 22)

Don't throw away the crusts—eat them. They are as nourishing as beef.

It is more exhilarating to feel money in your pocket than beer in your stomach.

You can sleep better after a hard days work than after a hard day's idleness.

Get good value from your tradesmen. They watch out that they get good money from you.

A bank book makes good reading—better than some novels.

There are two principal reasons why men lose what they have acquired

First, by being an "easy mark," lending to friends and relatives and unable to say "no" to a request for help or an alluring proposition. Second, the desire to make money fast—not by gambling, but by trying to get a large income from a small principal. The stories of men who have acquired considerable money, and in the desire to make it grow fast have lost it all would fill a book, and no caution is more opportune than this. Hold fast to what you have.

A few basic and common-sense rules will, if persistently followed, save those who heed them many a pang of regret:

First: Do not lend your friends Friendship loans are bad; it is a delicate matter to ask for your money.

Second: Never endorse a note for anybody. More losses and business disasters have come about through lending one's name to promissory notes than perhaps any single cause. If you want to help a friend and have the money to spare better make a gift outright and forget it than try to deceive yourself that it is a loan. If you can't keep your friends without lending them money better lose them; friends are easier made than money.

Third: Experience has again proven the country over that first mortgages on improved property at not over 50 per cent of fair market value is the most satisfactory form of investment and yields the highest returns compatible with safety. Savings banks specialize in mortgage loans, and you can follow their lead with safety.—Ogden Examiner.





## No. 6 Success Sulky Plow

A frameless plow in which are combined simplicity, strength, durability, service and moderate cost. It has every feature essential to the performance of perfect work. "It's the Way We Build Them."



Made in 10, 12, 14, 16 and 18 inch, right or left hand, and can be equipped with the style of bottoms which will exactly meet the most rigid requirements of any soil. Hundreds of thousands of these popular plows are in use in all parts of the country.

Heavy high carbon steel beams; high throat gives great clearance for trash. In turning, the rear wheel castors automatically, going back to its natural position as the plow resumes a straight course. Hitch adjustable for 2 or 3 horses, and for different depths. Eveners can't drop down on heels of horses. Will plow from 2 to 8 inches deep. Cushion spring absorbs all jolts and vibration when working in rough ground. Conveniently placed levers give easy control of plow. Wheels equipped with dust proof boxes, with sand bands and screw caps for using hard oil. Bottom is built on heavy double ribbed frog. Alfalfa shares interchangeable with regular shares.

Rolling coulters has a chilled cone take-up bearings. Rear wheel adjustable up or down to throw the plow on the point. Heavy axle saddle securely bolted to axle and beam; can't slip. Tongue Attachment and Swinging Hitch Attachment can be furnished.

Ask Your Dealer or Write to Nearest P & O House

Parlin & Orendorff Co.,  
Canton, Illinois

UTAH IMPLEMENT VEHICLE CO.

Sales Agents

Salt Lake City, Utah.

**Ask for Prices  
On This Hay, Alfalfa  
— and Clover  
Fork**  
Agents  
Wanted



**The National  
Giant  
4-Point  
Hay Fork**

The only fork which successfully handles alfalfa, hay, straw, blue-grass, red-top and other short, brittle "slippery" crops. Taken big bundles without spilling—unloads in less than half time—saves its price in a day's work. Don't wait. Send for full information now. Mention your dealer's name. Address

PORTABLE ELEVATOR MFG. CO.,  
888 East Grove Street, Bloomington, Ill.

### KEEP YOUR GARDEN SOIL BUSY ALL SEASON

Where Two or Three Crops Are Grown, A Space 25 x 70 Feet Will Produce Enough Vegetables For A Small Family.

Even the smallest back yard may be made to yield a supply of fresh vegetables for the family table at but slight expense if two or three crops are successively grown to keep the area occupied all the time, according to the garden specialists of the U. S. Department of Agriculture. People who would discharge a clerk if he did not work the year round will often cultivate a garden at no little trouble and expense and then allow the soil to lie idle from the time the first crop matures until the end of the season. Where a two or three crop system is used in connection with vegetables adapted to small areas, a space no larger than 25 by 70 feet will produce enough fresh vegetables for small family. Corn, melons, cucumbers and potatoes and other crops which require a large area should not be grown in a garden of this size. Half an acre properly cultivated with a careful crop rotation may easily produce \$100 worth of various garden crops in a year.

#### When To Work Soil.

If the garden was not broken in the fall it should be plowed in the spring as soon as the frost is out of the ground. Small areas may be worked with a spade, pushing the blade into its full depth and turning the soil to break up the clods. Heavy soils should never be worked when wet. Overzealous gardeners, ready to seize the first warm spell as a favorable opportunity to go out and work the heavy clay soil before it is dry, are not only wasting their energy, but are doing a damage to the soil from which it will take years for it to recover. To determine when heavy soils are ready for plowing a handful of earth should be collected from the surface and the fingers tightly closed on it. If the ball of compacted earth is dry enough for cultivation, it will fall apart when the hand is opened.

A garden spot near the house is often more desirable than a plot which is in better tilth but located at an inconvenient distance. A garden which is near the house will receive many a spare hour of care from adults and children which would otherwise be wasted. Where there is ample room for the selection of a garden site the slope of the land should be carefully considered. A gentle slope towards the South is most desirable for growing early crops, while it is a decided advantage to have the plot protected on the north and northwest by either a hill, a group of buildings, or a board fence.

Drainage of the garden is of great importance. The land should have sufficient fall to drain off surplus water during heavy rains and yet not be so steep that the soil will be washed or gullied. The surface should be nearly level so the water will not stand in hollows. Where the natural slope of the land does not provide sufficient natural drainage, ditches may be dug or a tile drain put in. This will prevent waste water from the adjoining land from washing over it. Such water may carry weed and grass seed into the garden, which are later culled out with difficulty.

#### How to Fertilize.

The soil in the average back yard is not only lacking in plant food but also has been packed until it is hard and unyielding. To loosen up such soil and make it suitable for garden produce requires that careful attention be given to its preparation. After spading the inclosure thoroughly, the upper three inches should be made fine with the use of hoe and rake. Stones and rubbish should be removed and clods of dirt broken. The surface should be made even and as level as possible. It may then be marked off for planting in conformity with the general plan of the garden. Barnyard or stable manure is the best fertilizer because it furnishes both plant food and humus. An application at the rate of from 20 to 30 tons to the acre of well-rotted manure is very satisfactory.

#### STOPPIN' THE PAPERS.

I've stopped my paper, yes I have—  
I didn't like to do it,  
But the editor got too smart  
And I allow he'll rue it.

I am a man who pays his debts,  
And will not be insulted;  
So when an editor gets smart  
I want to be consulted.

I took the paper 'leven years,  
And helped him all I could, sir,  
And when it came to dunnin' me,  
I didn't think he would, sir.

But that he did, and you can see  
It made me not as thunder,  
Says I, I'll stop the sheet, I will  
If the cussed thing goes under.

I hunted up the measly whelp  
And for his cunnin' caper,  
I paid his 'leven years and quit!  
Yes sir, I've stopped the paper.  
—Exchange.



**Popular  
Potato  
Planter**

AT A

#### POPULAR PRICE

With the great variety of sizes of pieces found for potato seed it has been found impossible to design MACHINERY to do anything like accurate work in dropping the seed at the desired distances and to deliver each and every piece into the ground uninjured and certain to sprout.

With a KEYSTONE Hand-Drop Planter this uncertainty has been entirely overcome and with this machine there is neither waste of expensive seed nor high-priced land. Strong, durable, simple; it is the ideal machine for the practical potato raiser.

Send for Catalog.

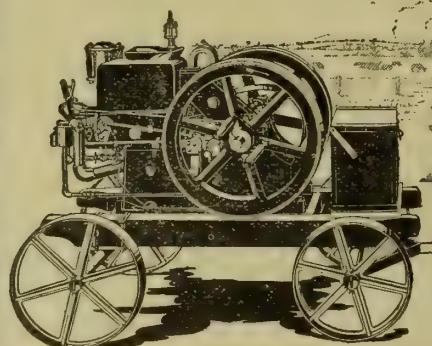
A. J. PLATT, MFG. Sterling, Ill.

**MILLER-CAHOON CO.**

General Agents

Idaho Falls, Idaho—Murray, Utah.

## Power for Forty Farms



**Mogul and  
Titan  
Engines**

**T**WENTY Titan engines of all sizes, all kerosene burners, were lined up in front of the I H C dealer's store at Litchfield, Minn., one day last summer. That day their new owners took them out to supply good, reliable power with twenty farms. A few months later Litchfield saw twenty more farmers take Titan engines out to their farms.

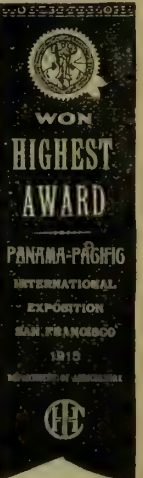
Two big I H C engine delivery days in that town last year. In many hundreds of towns you will find this same popularity of I H C Mogul and Titan engines—the best farm power—Grand Prize winners at San Francisco.

You must have an engine—then buy an International Harvester engine—Mogul or Titan. It will keep down your fuel and repair bills, deliver the most power with least trouble, and save you more hard work than you can realize now.

International Harvester engines are made in all approved styles, sizes from 1 to 50-horse power, operating on low as well as high-grade fuels. Some local dealer near you handles Mogul or Titan engines. If you don't know him, drop us a line. We'll send you full information, and make it easy for you to get the best farm engine made.

**International Harvester Company of America**

218 So. 6th West St., Salt Lake City Utah





## PLIGHT OF THE ELBERTA PEACH GROWER

(Continued from page 3)

mittee seems to be the only one thus far discussed.

I very much doubt if our Salvation lies in that direction. When I came here eight years ago, I made as careful and painstaking a survey of the situation as was possible at that time, from the stand-point of the prospective Peach Grower, and the unanimous opinion of those who seemed best informed, was that the Elberta peach, being par-excellence a shipping peach, a good yielder, and as free from cultural objections as any, was the peach to plant.

All who seemed licensed to speak with authority upon the matter at that time were preaching ONE VARIETY, AND CARLOAD SHIPMENTS.

This meant a Long Market with its attendant transportation, icing, detention, demurrage, switching, and a multitude of other minor charges, commissions at the other end, slow returns, and the usual risks which are inherent in that method of doing business.

We are now witnessing the disastrous effects of the state wide acceptance of that advice.

And NOW, after having gotten ourselves in the Blind-Alley, with NOTHOROUGHFARE ahead, and no room to turn round, with all our goods and chattels on the cart, including the Wife and Babies, it is small consolation to be told that if we unload a little today, and a little more the next day, we may, in the fullness of time, and by the grace of God, at least save the Cart, and possibly the Family Cat, if the nine-lived Brute has not already succumbed to the same process of Starvation that took off the Wife and Babies some time previously.

Now I am free to say that all this does not look good to your Uncle Dudley. He very much doubts the wisdom of any course of action that implies, or contemplates, a gradual, piece-meal substitution of any other peach for the Elberta.

If the Elberta peach has proved the financial undoing of so many people, and is inherently, and of its very nature, a calamitous thing, by what process of right reasoning can we justify any course that stops short of removing it, root and branch, the sooner the better?

If we set about to abolish a Nuisance why mitigate it in Sections? Why tolerate a Mitigated Nuisance at all, when the way is clear to remove it entirely?

You cannot make a Black thing White by painting it Gray. If, when I purchased my Canine eight years ago, the Long-tailed variety was fashionable, and now the Tail-less Dog has come into vogue, why should I attempt to follow the newer fashion by cutting my dog's tail off an inch at a time?

This not only prolongs the Transformation Period, but it seems unnecessarily hard on the Dog. And what assurance have I that the next change in the fashion may not bring back the Long-Tailed Dog?

I think that the more farseeing, clear headed fellow, who has no Emotional Enthusiasms, and Delusions based upon things hoped for, who finds himself up against this

proposition, will be apt to do one of two things:

If his soil, by reason of its character or location, or for any other reason, cannot be put to any better use, he will elect to stay with his Orchard, improve his methods as much as he can with the means at hand, working always toward a more localized distribution, better, staple, more attractive and honest pack, and having done all this, and thus reduced his expenses to a minimum, he will face the situation and make the best of it.

And even though his soil and location may be fairly well adapted to general farming, he may still elect to follow the above course upon the theory of survival of the fittest.

In other words, he will stand ready to catch the situation on the rebound, should the pendulum swing the other way.

Personally, I am well persuaded that in this present unfortunate crisis in the affairs of the Elberta peach grower in Utah, it is a case of "PULL UP, OR SHUT UP."

At least it is not a case for treatment by slow strangulation. FOR. (and here lies the gist, the kernel of the whole matter) after having, through the gradual substitution, or Amortization process, in the course of 8, 10 or 15 years, finally succeeded in converting our Elberta peach orchards over into a strictly canning or Local Market proposition, as now advised, what assurance can we have that the canning and Local or diversified market will not be in precisely the same predicament that the long-haul, car load, one-variety market is at this moment, and in that case would not our last condition be infinitely worse than our first.

Now I venture to say that every member of our committee knows almost to a dead certainty that this is the very thing that would happen.

And even granting, for the sake of argument, that after this long probationary period, one should find himself fairly well repaid for making the change in the manner suggested.

SO BE IT. But I am here to tell you that the man who dug up his Elberta trees early in the game, cleared his decks for action, and devoted all his time and energy to any other line of husbandry, as practiced successfully in his locality, would have made enough money to buy this man's holding many times over and still have money in the bank.

An orchard is such a slow-growing and expensive proposition even under the most economical methods of development that it does not lend itself to rotation treatment, and the man who attempts to blow hot and blow cold to fit fluctuating conditions will find himself left at the distance post. He will get into the money in a MILLION YEARS.

If I were a Sorcerer, and by waving the Magic Wand over my Elberta peach orchard could in the twinkling of an eye transform it into something else, I would probably do so, but even then I could not expect to get my troubles all back into the box. There would still be plenty left.

And I have about concluded that as for me and my house we will not yet dig up our Orchard. We are inclined to agree with our friend Hamlet, that it is better to endure the ills of life than flee to others that we know not of.

I shall improve my methods as

# L. D. S. Church Conference

SALT LAKE CITY

April 4th to 9th, 1916

LOW EXCURSION RATES

Via.



## Tickets On Sale

Nephi and Tintic District and all points East April 4th to 9th inclusive. Return Limit April 12th.

All other Utah points April 3rd to 8th inclusive. Return Limit April 15th.

## Meetings

LADIES RELIEF SOCIETY

APRIL 4th and 5th.

SEMI-ANNUAL CONFERENCE

L. D. S. CHURCH, APRIL 6-7-8-9th.

## Attractions

Salt Lake Theatre

Pavolwa Grand Opera, April 3-4.

Birth of a Nation, April 5-6-7-8.

Pantages ..... Vaudeville  
Orpheum ..... Vaudeville

Demonstration Train of the Utah Nevada Agricultural College will be open to the Public April 7th and 8th, 10 cars of Exhibits—Covering every Phase of Ranch and Home Development.

Train will be set at Salt Lake Route Union station South Temple and Third West Street

## Everybody Welcome

—Extra Cars on All Trains—

J. H. Manderfield, A. G. P. A.  
Salt Lake City



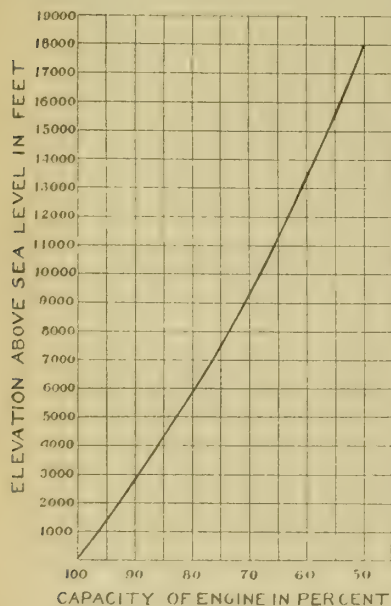
much as I can all along the line—I shall wrok for a more localized market, a better and more economical distribution system, a better, staple, more attractive and more honest pack, and if possible a reduction of my overhead expense, and having done all these things, having put my House in Order, I sall abide the outcome with all meekness and humility. And if the Elberta peach shall finally go to take her place in the Limbo of forgotten and unhonored things, my horticultural occupation goes with her. She was expensive company while we traveled together, but it was her misfortune rather than her fault, an I shall have not vain regrets.

## The Farm Tractor

L. R. Humpherys, Assistant Professor  
Farm Mechanics, U. A. C.

### Effect of High Altitudes

It is common knowledge that the higher the altitude the less the power an engine can deliver. This statement is true for tractors, automobiles, or any type of gas engine. The main reason for this class is that in high altitudes the atmospheric pressure and consequently the pressure in the cylinders at the time of ignition is much less than in low altitudes. There is also less oxygen for the same volume in high altitudes than in low altitudes and the intensity of the explosion (even though the carburetor adjustment is good) is therefore less in high altitudes than in low altitudes.



The first trouble can be overcome by using what are called high altitude pistons. These pistons are larger and give a higher compression than the ordinary piston. The second trouble cannot be overcome without special design. These losses are much greater than would ordinarily be supposed. The curve below shows the efficiency in per cent for various altitudes. It will be observed that at 5000 feet the efficiency is only 83 per cent of that at sea level. How much loss is there for your locality? Very often tractor companies confining their business more or less to central states will ship engines into high altitudes without looking into the loss of power. Being unable to supply high altitude pistons the tractor is more or less a failure.

## CARE OF THE SOW AT FARROWING TIME.

Dr. W. E. Carroll.

As spring approaches those interested in the hog business, if success is to attend their efforts, have several matters to take into consideration. By no means least among these is the care of the sow at farrowing time. This is the most important time in the entire season of the year so far as success or failure is concerned. The number of pigs a sow farrows is a relatively unimportant matter, the big question being how many she raises. The number of pigs farrowed is practically out from under the control of the hog raiser. The number of pigs raised, however, is very definitely related to the care taken and the treatment given the sow and litter at farrowing time.

Several days before the sow is due to farrow she should be placed in a pen by herself. This pen should be warm and dry and away from the other pigs so that they will not annoy the sow at the time she is farrowing.

The feed of the sow should be of a high protein laxative nature in order to get her system in good condition for the strain that is coming upon it, and also to give the developing young sufficient material for their proper growth. If the ration is of this character it will not necessitate any great change from the ration she is to receive while suckling her young, which in itself is of considerable advantage. The feeds most generally available to the Utah farmer is good quality alfalfa hay, and a grain mixture made up about as follows: three parts barley or corn by weight, and one of bran. The barley should be chopped, though the corn can be fed unprepared.

When it is evident that the sow will farrow within the next 24 or 48 hours, her ration should be reduced to about half its usual quantity. She should be given some dry bedding of which to make her nest, though this should not be given too freely, otherwise the straw will be so deep that the young pigs will become lost in it, and the sow is in great danger of lying on them.

If the pen is dry and fairly warm, most sows will need no attention during farrowing, and most sows object to anyone being around. If it is possible to observe the sow without being seen, it is well to determine if she is in need of any help. If the quarters are very cold it may be necessary to take the young as soon as they are born to a warmer place, or put them in a box well covered.

As soon as the sow is through farrowing she should be given a bucket of warm water. No solid food should be given until the following day when she may be allowed a warm bran mash. As the young pigs are usually not able to take much milk during the first several days of their life, it is well not to stimulate heavy milk production in the sow, otherwise udder trouble may develop. Gradually bring her up to full feed so that the end of 10 days or 2 weeks she is consuming about all the alfalfa hay she will eat, and in addition about all the grain she will clean up twice a day.

Where alfalfa pasture is available turn the sow and litter on this, and with a generous supply of grain, the cheapest and most rapid gains possible will be made.

# Home Study Course of Piano Lessons

Just Published

## The Utah Conservatory of Music

announces the publication of

## Prof. J. J. McClellen's Written, Home Study Course of Piano Lessons

The Course is systematic methodical, and covers 15 years of Prof. McCellan's practical teaching experience. The student covers two years' work in one year's time. Recommended to all earnest students of music and teachers by the best music authorities in the state.

We also have written courses for Band Instruments.

Our course of studies include Piano, Organ, Voice, Violin, Dramatic Art and Band Instructions.

You will save both time and money if you will write us a card or letter, we will then tell you all about this course of Piano studies.

Send us your name and address we want to tell you more about this splendid course of studies written by Prof. J. J. McClellan.

## Utah Conservatory of Music

Templeton Building

Salt Lake City Utah



# The Lawn

## Preparation of the Land

Every farmstead should be so planned that it will have a lawn which appears bright green, thick and well clipped at all times. Whenever, for want of care or lack of fertility, the weeds have taken entire possession of the land, renovation is necessary and often radical treatment must be resorted to. In preparing the land the sod should be turned under and thoroughly cultivated for one year, until all the weeds have been eradicated. All hollows or mounds should be scraped level for if water stands in depressions during the winter it will kill the grass roots. Before leaving the preparation of the seed bed it should be rolled to break up all lumps and raked and re-raked until a fine surface is obtained.

## Fertilization

After the sod has been turned under, from forty to fifty loads of well-rotted barn dressing per acre should be applied and worked in during the process of cultivation. For a chemical fertilizer, fifteen hundred pounds of ground bone, three hundred pounds of muriate of potash and two hundred pounds of nitrate of soda per acre may be used to good advantage.

## Seeding

The month of April is the best time to seed down the lawn as at that time the conditions of moisture are most favorable and the weeds do not grow so abundantly. If it is not possible to seed at this time, August might be suggested as the next best month as seedlings sown later than this are very liable to heave from the freezing and thawing. As indicated above, the seed should be sown in a fine seed-bed and on a still day. In order to insure a perfect and uniform distribution the seed should be divided into two parts, one to be sown lengthwise and the other cross-wise of the piece. It does not seem advisable to roll the land as this will leave a smooth surface and expose the plants to a greater action of the hot sun and drying winds.

The following mixture may be used per 100 square rods:

Red top (cleaned).....	38 lbs.
Kentucky Blue Grass.....	18 lbs.
White Clover .....	6 lbs.
Total .....	62 lbs.

## Use of Trees

In order to avoid spoiling the newly made lawn, all planting of trees, shrubs, vines, etc., should be done before sowing the grass seed. In order to avoid the risk of injury through delay in transportation they should be purchased from a concern near at hand. It might be well to add at this point that trees should be ordered early enough to avoid the rush in the spring.

In general, trees should be planted in the spring and as early as the soil can be worked into a fine, mellow conditions. However, evergreens transplant best in May and June. On account of the fact that some of the roots are broken off when the tree is dug and the balance between the roots and tops destroyed, it is necessary to cut back the tops of all trees at settling time with the exception of the evergreens which are never cut in this manner.

The planting of the tree is a most

important operation and great care should be taken to see that it is well done. The tree should be placed in the hole at the same depth that it grew in the nursery. The roots should be spread out carefully and fine mellow earth pressed firmly around them leaving no air spaces. To insure perfect contact this should be done with the hands. After covering the roots two or three inches deep, more soil may be thrown on and tramped down thoroughly, taking great care not to injure the roots. The rest of the soil which is thrown in loosely and not tramped down, serves as a mulch during the summer.

Moisture is very important to the young tree. If the soil is moist at the time of setting, no water is needed; but if the soil is dry, water should be poured into the hole and allowed to settle and then refilled several times before the trees is put in. Water may also be applied after two or three inches of soil has been put on the roots. Unless it is applied in large quantities water poured on the surface does little good for it never penetrates to the roots. To keep plenty of moisture around the roots for the first season, a mulch of straw, brush, or similar material may be laid around each tree. This mulch should not be more than two or three inches thick as a greater thickness would cause the roots to grow so near the surface that they would become liable to winter injury.

## DO IT NOW.

I. D. O. Donnell.

Name your farm. No business man would think of doing business without a name for his business. A good firm name becomes an asset. Put the name of your farm where it may be seen from the public road; also put it on your letterheads and on the products you sell. One of the big manufacturing institutions in this country has put up signs throughout its plant as follows: "Protect our good name." Name your farm, make a good reputation for that name, and then protect it.

Be a neighbor. Don't have people referring to you as "the man who lives over there." Make them glad to call you neighbor.

Farmers' institutes and farmers' schools will be held in most States of the West in February. You ought to attend and do your share toward building up agriculture in your community and incidentally develop a little community spirit.

It is time to be ordering new trees and shrubbery for spring planting. Don't let a spring go by without putting out something new. Each new tree or plant adds new interest to life on the farm.

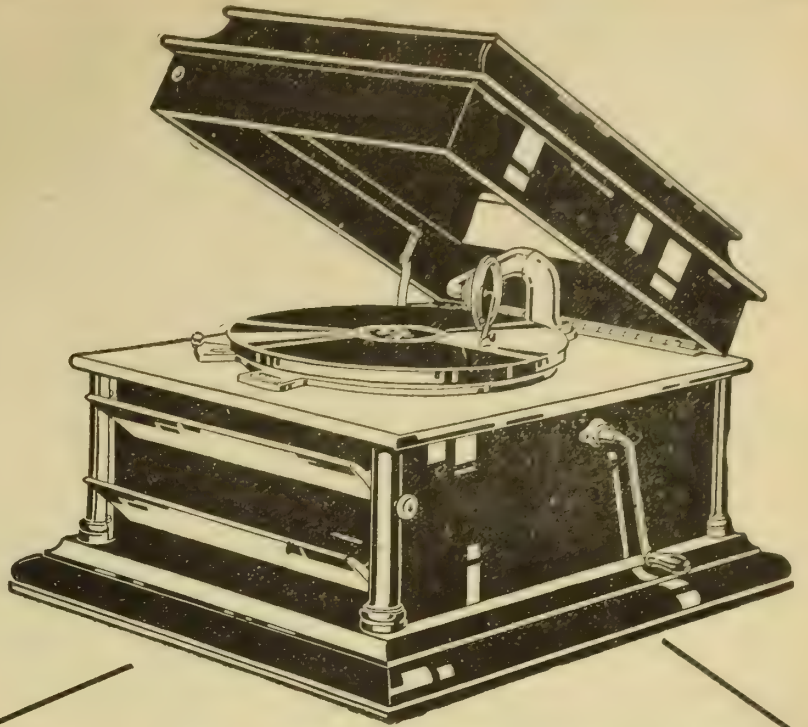
These are good days to be cleaning up grain and grass seeds for spring seeding. Do this work now, while you have plenty of time, for the more thoroughly you clean the seed the better you will be repaid.

## ONE WAY OUT

"I wish I knew how to get rid of trouble."

"I'll help you out. I know a fellow who is always looking for it!"

—Judge.



**PAY ONLY \$1.00**  
after you try it

The wonderful style "50" Columbia GRAFONOLA — the one that has been sold for four years to more people than any other instrument regardless of name, price or make.

# COLUMBIA

"The Gem of The Talking Machine World"



Brilliant, vivid and clear, yet unmistakably NATURAL, round and "big" in TONE-QUALITY—capable of every gradation of TONE-VOLUME — the COLUMBIA GRAFONOLA is rightly named "The one incomparable musical instrument."

## Special Limited Offer to You

If you wish to keep this wonderful instrument after you have tried it thoroughly, send us the \$1 then. And after that pay the balance in most convenient MONTHLY PAYMENTS. No C. O. D.—No money at all until you try the instrument and decide to keep it.

## Our New Columbia Catalog Sent Free

Your name and address on the coupon brings you the new big Columbia Catalogue by return mail FREE and postpaid, and with no obligation in the least.

COUPON  
DAYNES-BEEBE  
MUSIC COMPANY  
45 Main St.  
Salt Lake City Utah  
Gentlemen:—Please send me your new COLUMBIA CATALOG and full particulars of your FREE TRIAL OFFER.

Name.....  
Address.....

**Daynes-Beebe Music Co.**  
JOSEPH J. DAYNES JR. PRESIDENT  
ESTABLISHED 1860  
45 MAIN ST. SALT LAKE CITY, UTAH.  
"OLDER THAN THE STATE OF UTAH"





CONCRETE SEWER AND IRRIGATION PIPE.  
They Grow Harder and Stronger With Age. All Other Pipes Decline.  
ABSOLUTELY ALKALI PROOF  
UTAH CONCRETE PIPE COMPANY  
Salt Lake City, Utah.

## MODERN MACHINERY

# LANDES & CO.

Phone Was. 830  
2nd West & So. Temp.  
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AVERY TRACTORS  
NOVO GASOLINE ENGINES  
AUSTIN WESTERN ROAD  
MACHINERY  
PUMPING PLANTS

FOR  
SALE  
BY  
ALL  
DEAL-  
ERS.



GENERAL OFFICES OGDEN, UTAH

GARMENT WEARERS,  
ATTENTION!

## Temple Brand GARMENTS

The above label is found in the neck of all approved Temple Brand Garments. Be sure it is in the garment you buy.



If WE Insist Today

## Capells Sanitary Salt

YOU'LL Insist Tomorrow

## Mail Your Laundry

to us by

## Parcel Post

—regular city prices for out of town customers.

One trial will convince you.

## Royal Laundry

SALT LAKE CITY

Something for the Home



## CORONA TYPEWRITERS

weight 6 pounds

Agents, A. B. Dick Mimeographs  
Addressing machines and all makes of typewriters.

UTAH TYPEWRITER  
EXCHANGE CO.  
36 W. 2nd., South.

## THE TRADE MARK

Are the signatures of the manufacturers upon the goods. It is the unmistakable evidence of their responsibility. The manufacturer who "signs" his name to his goods assures the buying public of this responsibility.

The public are very exacting judges. They buy the goods, and if the goods win that manufacturer wins. And the good nearly always win because every shrewd manufacturer is careful about the quality of the goods he signs.

When he sends out a product with his signature upon it, he must be careful, he cannot afford to be otherwise. This modern method of signing their



We are the  
people who  
make

VITRIFIED  
CLAY  
DRAIN  
TILE  
for farm  
drainage.

That will not  
decompose with time alkalies or acids.  
SALT LAKE CITY, UTAH.

Approved Garments



QUALITY GUARANTEED  
36 Main Street

SALT LAKE CITY

## "QUEEN'S TASTE"

Macaroni, Spaghetti and All "Queen's Taste" Products Always Please

WESTERN MACARONI  
MFG. COMPANY  
Salt Lake City, Utah.

METAL POLISH



AGENTS  
WRITE FOR  
OUR  
PROPOSITION

Utah Steriline  
MADE IN UTAH Manufacturing Co.  
414 McIntyre Bldg. Salt Lake City

NONE BETTER MADE



ASK YOUR DEALER



Write us Before Placing Your  
Next Order

A TRADE MARK



That Stands for Better Farming and Better Homes.  
Helpful suggestions every week that will help you  
solve your farming problems.



GOOD MORNING!



ASK YOUR GROCER  
FOR  
FOREST DALE  
SARATOGA CHIPS  
AND  
GILT EDGE BRAND  
HORSERADISH

The Philip Bern Company  
Painting and Decorating  
Wall Fabrics -- Wall Paper  
Artistic decorators of Homes,  
Banks and Theatres, throughout  
the Inter-Mountain Country. De-  
corators of the Utah State Capital.  
60 Exchange Place  
Salt Lake City

BUY THE  
"Utopia"  
and  
"U" Cross  
Brands  
of  
Hams, Bacon and Lard,  
There is nothing better.

Ask your Grocer and Meat  
Market.

If you have live stock to  
sell communicate with us

UTAH PACKING  
and  
PROVISION CO.



**Segó**  
MILK

—Cream's only rival.

SALT LAKE WIRE & IRON WORKS  
Everything in Ornamental Iron and  
Wire Work.



Wrought Iron Coal Shutes a Specialty  
242 EDISON ST.

## OR THE FIRM NAME

names to their products is helping the honest manu-  
facturer and it is also protecting the public.

To make the future business sure the trade  
marks or firm names, really guarantee a standard  
quality and at prices that are right.

When any good products become known—it  
helps to sell that same product at a lower cost. In-  
creased output or sales means that the manufacturer  
can lower the selling price and still maintain the  
quality.

It is a good rule to follow—always buy goods  
that the manufacturer is not afraid to sign.



ROYALLY MADE  
FOR A  
CRITICAL TRADE

## What Are Your Printing Needs

Every farmer should pay  
more attention to his needs in  
printing. Those not acquainted  
with him judge him by the  
printed matter he sends out.  
Neatly printed Letterheads,  
Envelopes, Butter Wrappers,  
Advertising Circulars, etc.,  
add greatly to his influence and  
prestige.

What Are Your Needs?

We are equipped and pre-  
pared to furnish you with any-  
thing in that line at the lowest  
possible cost.

Send us your next job, or  
get our estimates.

LEHI SUN  
PUBLISHING CO.

Lehi Utah

## CUT RATE TIRES

Not inferior goods, but

Good Tires at Better Prices.

Write or phone us and we will  
gladly quote prices and show you  
how we can save you from 25 to  
40 per cent on tires and tubes.

41 So. State St. Phone Was. 2975  
Salt Lake City

INSIST ON  
AGNEW'S  
QUALITY  
CHEESE  
in tinfoil packages  
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"It Spreads"

OLDEST KNITTED GARMENT  
HOUSE IN UTAH. WHY?  
QUALITY AND WORKMANSHIP!



WHEN IN SALT LAKE  
MEET YOUR FRIENDS  
AT



HART'S LUNCH

MERRILL-KEYSER  
CO.

Buyers and  
Wholesale Shippers  
GRAIN PRODUCE, BAGS  
SALT LAKE CITY  
Ask for quotations.

## MAIL US YOUR FILMS WE PAY POSTAGE

We Develop Any Size Roll 10¢  
We Develop Any Size Film Pack 20¢  
We Make An 8x10 Enlargement 25¢  
Larger Sizes At Equally Attractive Prices  
**Schramm-Johnson**  
KODAK-KRAFT SALT LAKE CITY



Distributors of  
The Famous  
BRASCOLITE

The Finest  
Light Unit Known





# Humbugging The Sick

Second Article by the State Dairy and Food Department and State Board of Health.

All of us, at one time or another, have joked about the advertisements that promise to grow hair on bald heads by means of some new, magic, wondrous and secret—oh, very dark secret—tonic. In fact, the promise to grow hair on doorknobs has become a stock joke. All sensible persons concede that hair cannot be grown on bald heads. If it could, there would be no baldness and barbers would just have to drop toupees as a by-product, for where is there not a bald-headed man—or woman either; there really are bald ladies—who would not give his—or her—entire savings to have a crop of locks upon that shining pate.

It is a joke, we say, but to the person who spends five or ten dollars of hard-earned money in again search for hair, it is much less humorous. Such a one, likely, could not see anything else in it but plain fraud.

But it becomes serious when makers of so-called "medicines" prey upon the gullibility of those seriously afflicted. We may have no sympathy for the vanities of the hairless, but when the victims of similar deceit are those afflicted with diseases that, under lack of treatment or under wrong treatment, become fatal, we see it is time to stop laughing. We realize that a stop must be put to such nefarious deception.

"The public likes to be humbugged," said Barnum, and proved his candidly spoken statement by humbugging them. But the circus man's work was innocent enough in its way. He took away the half dollars and gave in return a bit of cheap amusement or at least fifty cents worth of experience to everyone humbugged. He did not take away their ability to see bona fide shows in the future.

That is where the bogus medicine maker out-barnums Barnum. His work is no circus, excepting in the matter of receipts. The poor victims have no show at all. They pay their gate money but do not even get a seat and Death usually rings down the curtain so that they cannot get a chance to retrieve their error. Whether it be true that the public likes to be humbugged or not, it is certain that the public can be humbugged. And the easiest person to fool is the sick man. Selling a sick person some fake "medicine" is as easy as the proverbial taking of candy from a baby.

Health is our choicest possession. Money means nothing, for instance, to the consumptive who knows himself to be incurable, unless it be he wants it to provide him a decent burial when next week or next month his cough claims him as its victim. So he will spend every dollar for a concoction that is "guaranteed to cure" him, and whose only virtue is, perhaps, that it is loaded with alcohol and will send him quick relief to his suffering—relief in the form of a pall.

When a company has a corner on something that everyone wants, that company has veritable gold mine. There is the widest demand for health. Within certain limits, too, health is purchasable. Reputable physicians can cure most ailments and stall off the grim reaper for a long time in

even the most serious. But no one has a corner on health. Yet these advertising humbuggers boldly exploit it as their stock in trade and insult our intelligence by offering to sell it to us as so much a bottle. They get away with the insult because many of us are gullible enough to bit at the brightly-colored fly.

If all the medical advertisements we read every day, or even part of them, were true, what a wonderful world this would be. There would be no deaths, for all could be cured just as soon as they acquired an ailment. People would just have to stop dying of anything except old age and perhaps the Fakers will soon discover a "cure" for that.

Just imagine, if you can, a condition where there be no consumption, no weak hearts, no cancers, no kidney trouble, no coughs, no colds, no indigestion. Everyone could eat cabbage and restaurant pie in gay abandon with the remedy for stomach gas at the right of his plate and Dr. Faker's Favorite Prescription for the cure of indigestion at the left.

There would be no need of doctors or undertakers. Life would be one grand little round of doping. Every other store would be a medical "institute" or college and the world and all the people would be full of hope and cure-alls.

If that were true, the newspapers would likely have no room for news—there is little enough space as it is—and all the reporters could be put to writing doctor's advice and all the artists to drawing "before and after" photographs.

It is sad we cannot have such a Utopia. When John Jones (the name, of course, is fictitious) reads that Dr. Wimpuss's collection of roots and herbs will positively CURE rheumatism, John immediately wants to try it. He does, and comes forth a wiser, a sadder, a poorer and just as rheumatic a man. Or perhaps more so of the latter for he has wasted valuable time when real treatment might have benefited him.

Millionaires are frequently sufferers from various maladies brought on by high living and lack of exercise. If these advertisements are true why do not the monied sick buy their way back to boyhood's redloodedness and ability to devour green apples. Perhaps they don't read the papers. They surely don't or they would see where it plainly and candidly states (with a very small "adv:" at the bottom) that anything in the world from chronic corns to brain fever can be cured—effectually and permanently—by merely rubbing some of the famous Dr. Quacko's good old linament on the left eyebrow.

"But what of the testimonials?" you ask. "What about Bill Smith of No. 23 Wishwash street, Squeedunk, Minn., who miraculously regained his health through some widely advertised 'cure'?"

In a subsequent article we will answer those questions more thoroughly. The Utah State Board of Health and the State Food Department is prepared to prove that at least many testimonials are as worth-

# Planet Jr. Tools

## get largest crops with least work

What's the use of drudging to get ordinary results when a Planet Jr Seeder or Cultivator does six men's work, and gives you an increased yield besides? Planet Jrs are patents of a man skilled both in farming and manufacturing for over 35 years. They are light, strong, lasting, and fully guaranteed.

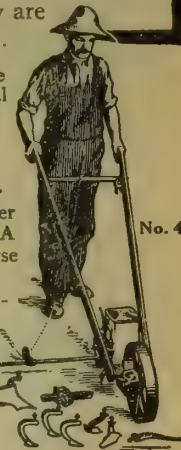


**No. 4 Planet Jr Combined Seeder and Wheel-Hoe** saves time, labor, seed and money. Almost all useful garden implements in one. Adjustable in a minute to sow all garden seeds, hoe, cultivate, weed, or plow. Pays for itself quickly, even in small gardens.

**No. 8 Planet Jr Horse Hoe and Cultivator** will do more things in more ways than any other horse-hoe made. Plows to or from the row. A splendid furrower, coverer, hiller, and horse hoe; and unequalled as a cultivator.

Come and look over these up-to-date implements.

Full Line of Garden Tools, Wheelbarrows, Rakes, Lawn Mowers, Hoes, Spading Forks, etc.



Notwithstanding the fact that all manufacturers and dealers have advanced their price on garden tools The Planet Junior remain the same.

IDAHO

UTAH



NEVADA

WYOMING

# Every Farmer Knows

—that **COMFORT** and **EASE** don't generally go with hard work, but—

**SCOWCROFT'S MADERITE**

work shirts make hard work **EASY**.

Next Time Buy

**SCOWCROFT'S MADERITE**

you'll be surprised how much **COMFORT** and **WEAR** a **REAL** work shirt can give and how **EASY** your work seems in a

"**MADERITE**"

ASK THE MAN  
WHO WEARS THEM.

**JOHN SCOWCROFT and SONS CO.**  
Ogden, Utah.



less as the "medicines" they back up.

As to poor Bill Smith of Squeedunk, the chances are if he testified he was cured of tuberculosis that he is long since dead and the Fakers are using the testimonial he gave when he merely thought he was getting well. Or, if he was cured of stomach trouble, it may be he got well in spite of the fact that he dosed his innards with a lot of worthless junk or injurious alcohol.

Nature performs many cures for which quack remedies are credited.

The Utah State Departments of Health and Food have no quarrel with the newspapers. But we do insist that newspapers should not lend their columns to the perpetration of medical frauds upon the gullible. Many people still insist on believing everything they see in print. Consult your daily or weekly paper for news; not for health.

### WARNING TO STALLION OWNERS

W. E. Carroll, Secretary, Logan Utah.

Word has come to the State Board of Horse Commissioners that there are certain unauthorized quack veterinarians in different sections of the State making examinations of stallions and collecting money for the same. The State Board of Horse Commissioners wishes to disclaim connection with such men who cannot produce a certificate of appointment properly made out and signed by the Utah State Board of Horse Commissioners.

The Board warns all stallion owners against such men, and asks that they exercise due caution not to be "taken in" by transient quacks traveling through their section. Such men have no connection with the State Board of Horse Commissioners and therefore have no authority in the matter of licensing stallions.

### FEEDING THE MILK COW IN WINTER

C. H. Eckles, Missouri College of Agriculture.

The best results with milk cows demands that the milk flow be kept up during the winter as well as during the remainder of the year. A herd that is allowed to drop in this particular when winter comes on not only lowers its profit at that time, but is hard to bring back when winter is over. Reports received show that average cows in the best managed herds of the state often produce two or three times as much butter during the year as does the average dairy cow of the state. This difference results largely from the fact that these herds continue high in their milk production during the winter.

A good milk flow results largely from careful feeding, although shelter and other phases of management are also important. The man who is getting poor results is usually feeding timothy hay, corn fodder, and corn, and perhaps not enough even of these. The man who is getting good results has learned that such a ration will not enable a cow to produce milk enough to make it profitable. It is not necessary to buy large quantities of expensive feed to make a good ration, as it can all be grown on the farm. If the proper ration is not at hand, however, it will usually pay to buy something suitable, or possibly trade some of the feeds on hand for others which will give better results.

The man who gets good results

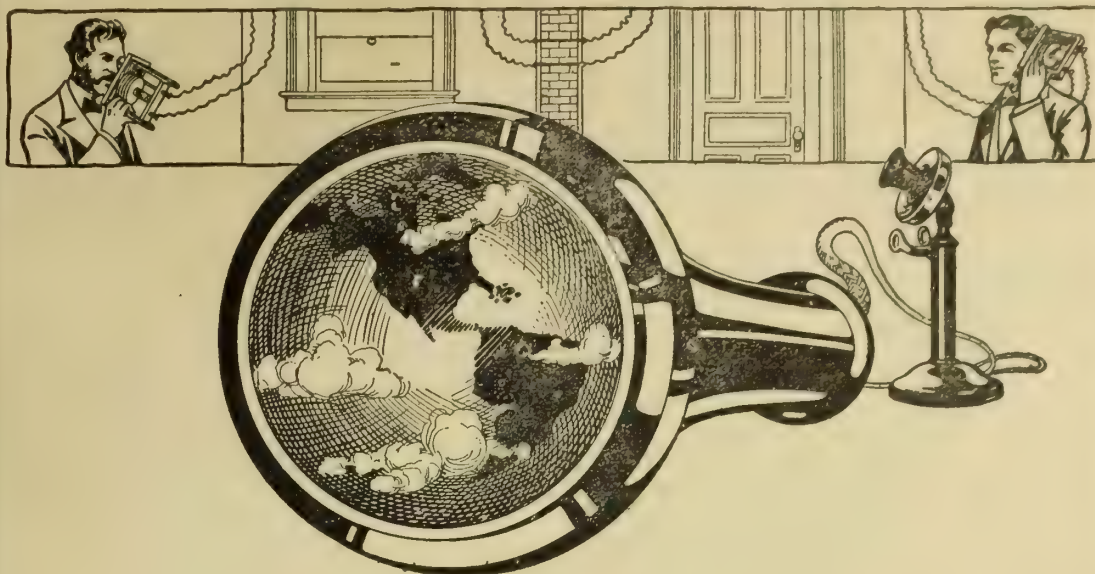
with cows feeds clover, alfalfa, or cowpea hay for the roughness, takes care that the cows have plenty of it, and, if he has some corn fodder, feed some of this in addition during the day. If hay of this class is fed, it is all right to feed a considerable quantity of corn for grain.

The feeds which are generally fed in this section may be divided into two classes. The first includes those

lacking in protein. They are used mainly to produce fat and do not have protein enough for milk production. In this class we have corn, corn fodder, timothy hay, straw, millet, and sorghum. The second class of feeds includes those which contain more protein to supply the food necessary to produce milk. In this class we have clover, cowpea and alfalfa hay, bran, oats, cottonseed

and linseed meal. A good daily ration will include feeds from both of these classes and it is impossible to make a suitable ration by feeding those in the first class only.

A good ration for a cow producing from 24 to 28 pounds of milk per day, would be all she would eat of clover or alfalfa hay and for grain from 6 to 8 pounds of mixtures of bran, oats and barley.



## Two Score Years of Telephony

**F**ORTY years ago, Alexander Graham Bell spoke over the feeble instrument he had invented, to Thomas A. Watson—only two telephones in the world and a hundred feet of wire.

Recently the same men spoke to each other from the Atlantic to the Pacific over the Transcontinental Line—more than fifteen million telephones in the world and nine million in the Bell system. Twenty-one million miles of telephone wire connect every state in the union, and the wireless telephone has extended speech across our ocean boundaries.

A chorus of twenty-eight million Americans is brought into perfect unison daily by the Bell System, that unifier of the nation and harmonizer of distant peoples, which bridges distances, outraces time and makes a whole nation one community.

**The Mountain States Telephone and Telegraph Co.**



# Oakland



## Power -Multiplied

**O**AKLAND Power means tremendous reserve for the hard places—the mighty pull that takes the car easily through deep sand or mud and up the steep hills without laboring or straining.

Reserve power also means that in ordinary driving your car is running easily—not giving its greatest effort. This insures longer life for the motor and every part of the car. It means economy of gasoline and oil. It means confidence and satisfaction for the driver.

Let the nearest Oakland dealer demonstrate the Oakland of your choice. Write for Catalog.

Oakland Motor Company, Pontiac Michigan

### The Oakland 6—\$795

f.o.b. Pontiac

With all its strength and power, weighs only 2100 pounds, *fully equipped*, ready for the road. Built for five people. Also in Roadster body.

### The Oakland 8—\$1585

f.o.b. Pontiac

With high speed motor, 73 h. p. Astonishing flexibility and economy. Built for seven with room for more.

### The Oakland 4—\$1050

f.o.b. Pontiac

With high speed motor runs as smooth as ordinary motors of more cylinders, retaining the simplicity and economy of the four-cylinder construction.



"Sturdy as the Oak"



# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region

OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE

VOLUME XII; No. 34

LEHI AND SALT LAKE CITY, UTAH

MARCH 25, 1916

LIBRARY  
College of Agriculture  
University of Utah

## SPECIAL EXHIBITION Of Farm Machinery



VAST CHANGES IN AGRICULTURAL LIFE AND IN THE IMPLEMENT WORLD ARE TAKING PLACE. THE KEENEST BRAINS OF THE COUNTRY ARE CONSTANTLY AT WORK TO INVENT MEANS OF IMPROVING AGRICULTURAL MACHINERY AND SOLVING THE FARM PROBLEMS.

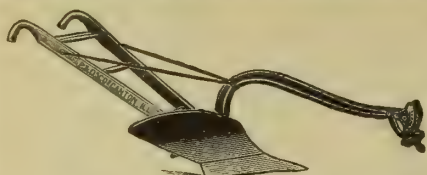
LABOR SAVING MACHINERY ON THE FARM AND IN THE HOME MEANS MUCH TO THE FARMER AND HIS FAMILY OF TODAY. MACHINERY THAT WILL SAVE THE COST OF EXTRA HELP, WILL ALLOW THE FARMER TO ACCOMPLISH GREATER RESULTS AND IS PROFITABLE FOR HIM TO OWN.

THE FARMER OF TODAY KNOWS HE CAN MAKE MORE MONEY FROM A WELL EQUIPPED FARM THAN IN ALMOST ANY OTHER OCCUPATION. SO HE CULTIVATES EVERY ACRE, WITH THE BEST IMPLEMENTS, USING THE MOST MODERN METHODS.

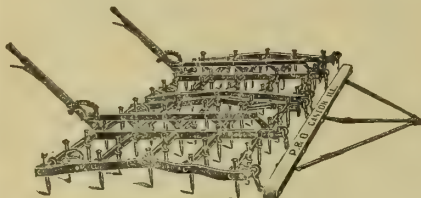
KNOWING THAT THOUSANDS OF PEOPLE WOULD VISIT SALT LAKE CITY DURING THE FIRST TWO WEEKS OF APRIL, COMING TO CONFERENCE, UTAH PRODUCT SHOW, AGRICULTURAL TRAIN, CONVENTIONS AND MEETINGS, THE IMPLEMENT DEALERS HAVE PLANNED FOR A SPRING EXHIBITION OF FARM MACHINERY.

WE SUGGEST THAT YOU READ THE ADVERTISEMENTS IN THIS ISSUE AND THEN PLAN WHILE YOU ARE IN SALT LAKE TO VISIT THE EXHIBITS. IT WILL BE WORTH YOUR WHILE EVEN IF YOU DO NOT INTEND TO PURCHASE ANY MACHINERY RIGHT NOW. GO SEE WHAT LABOR SAVING MACHINERY IS OFFERED FOR YOUR USE, IT WILL BE TIME WELL SPENT.

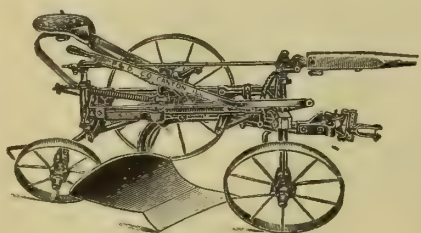




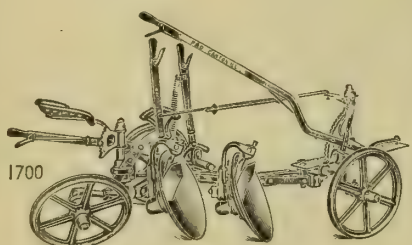
SCOTCH CLIPPER PLOW



CANTON HARROW



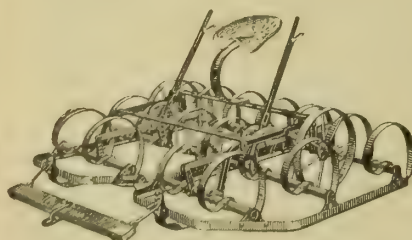
SUCCESS SULKY



SANDERS DISC PLOW



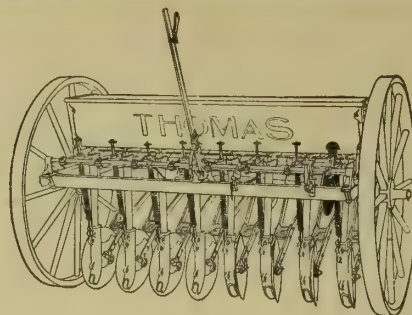
STAR DISC



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BEET CULTIVATOR



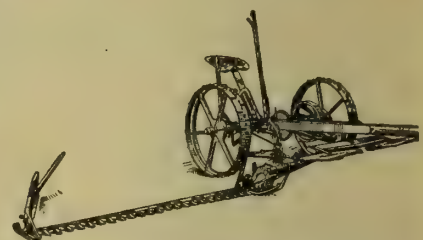
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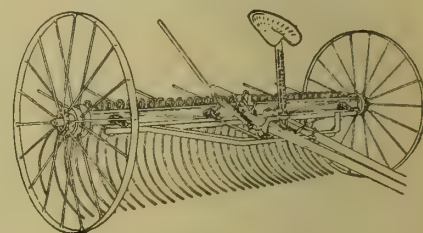
IRON AGE POTATOE PLANTER



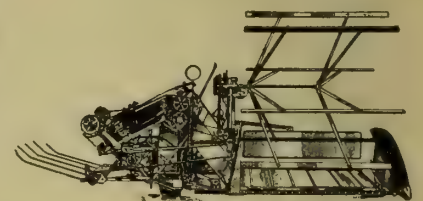
IRON AGE GARDEN DRILL



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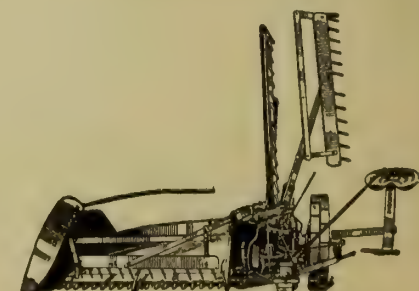
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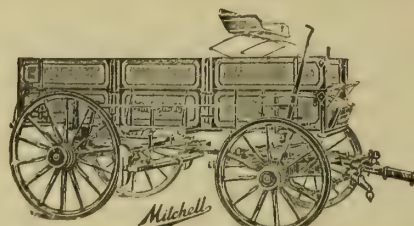
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VOLUME XII.

LEHI, UTAH, SATURDAY, MARCH 25, 1916

No. 34

## An Argument for Good Roads Pumping for Irrigation in Utah

By Wm. F. Long.

L. M. Winsor, Utah Agricultural College and U. S. Department of Agriculture

A great many people are complaining about the high cost of living, their inability to "meet" expenses, much less to be able to live in comfort and luxury. They are at a loss to understand the rather uncomfortable state of affairs. True they realize that some thing is wrong, but just what that something is they are unable to determine.

Some have gone so far as to blame our economic and financial policy (what ever that might be), others the tariff, immigration, over production and countless other more or less complex causes which seem so distant

of personal energy expended, measured by both physical and mental labor, to obtain the maximum of profits from a minimum of investment; to produce our goods, our saleable products, our live stock or what ever we may have for trade at a minimum of cost in order that we may successfully compete with that demand of progress rightly called competition! In the days of the Pioneers this state of affairs was undreamed of. A farmer or a manufacturer could produce a certain article, add to the cost of production—what ever that might be—a

is capable of wonderful development, that it is teeming with undreamed of possibilities and resources, and that the fertility of its soil is unsurpassed, the one and all important question is: Are you conserving all of your resources are you taking advantage of every ounce of soil fertility, every grain of possibility—so that you can produce your articles, your goods at a minimum of cost? Or, are you like the man who tires to conserve his water supply by storing it in a sieve, wasting your energies, your soil fertility, and the vast resources which

In Utah, we are at the dawn of a new era in agricultural development, where lands heretofore considered desert wastes will be transformed into prosperous farms; where communities held down in their development by the shortage of water for irrigation will be made to grow and expand; and where immense farm areas whose crops burn up in July and August because of water shortage will be supplied at the time when water is most needed. All of these things will be accomplished by the use of the pump in irrigation, together with a more economical use of gravity streams.

The irrigated area in Utah may easily be doubled without decreasing by one pound the yields per acre on a single farm. This is a very conservative estimate of the development which may be expected, considering the resources of the state as regards lands available, and the natural water supply. Utah has an area of tillable land estimated at ten million acres with but one million acres actually under irrigation. The gravity streams of the State which are easily accessible, are all appropriated at low water time.

There remains then, three main sources from which water may be obtained for use in the further expansion of Utah's irrigated area. They are:

First and most important, "a better, a more judicious, and therefore, a more economical use of the water already carried in the gravity canals."

Second and least important, for the present at least "the storage of flood waters which go to waste in the spring time."

Third and of the most immediate importance, "Pumping for irrigation, from the underground supply and from springs and streams which have their source too low in elevation to be of use in gravity irrigation."

When these three sources of supply have been exhausted, Utah will easily have under irrigation three or more million acres of well irrigated land.

The more economical use of the water carried in the older canals must of necessity come about slowly, since the users must be educated to the fact that water used more judiciously than is the common practice, will bring better returns, and since laws must be enacted providing for a more economical distribution of the State's water supply than those in effect today. The storing of flood waters is made possible in a limited way by the use of high line canals, but in a bigger way by the construction of reservoirs. The reservoirs of the future will be expensive of construction.

(Continued on page 14)



A VIEW OF THE CONCRETE ROAD BETWEEN OGDEN AND SALT LAKE CITY.

and vague that they are not readily understood by the average person.

In connection there with, one able authority has dared to suggest that if some of these afflicted persons, instead of looking afar off for reasons for their distress, would but "come down to earth" so to speak, put on their reading glasses, so that they could examine local condition more minutely, they might possibly discover, very close at hand, some things that have seen instrumental in causing the balance to be placed upon the wrong side of their ledger.

The one great tendency of the age is to make the human machine more efficient; to obtain from it the greatest amount of output for the least amount

certain amount for profit. Be it twenty-five, fifty or even two hundred per cent—get his price—and then prop his feet up along side of a good warm stove for the rest of the winter! Today things are vastly different. World-wide competition sets, controls and absolutely governs the price for which an article may be sold, and unless the producer can meet that price—can compete with his neighbor across the way or across the ocean—well, he may as well go out of business, go back east and live on his wife's people for the rest of his or their life.

The Agricultural history of Utah during the past few years has demonstrated beyond a doubt that the state

your state has to offer you?

There are various forms of waste-fulness indulged in by every human being, but the one big form of waste which is commanding the attention of the masses today is the waste incurred by hauling one's products to market over bad roads. Some of these are nothing but veritable sloughs, in which both the traffic and the taxes are hopelessly "Bogged down." These are a greater tax upon the farmer—everybody else that must needs use them—a greater draw upon ones resources, than any other single factor. "Bad Roads" are a big determining feature of the PRESENT HIGH COST OF LIVING.

(Continued on page 10)



## THE HOME

Simple bills of fare, helpful recipes, and practical directions for the preparation of foods for children between three and six years of age are contained in farmers' Bulletin 717, "Food for Young Children," just issued by the U. S. Department of Agriculture. The Bulletin, is easy to understand and should be helpful to mothers.

The author has carefully avoided the use of all technical dietary terms or system of grouping and has so classified foods that any mother can meet the following definition of a

satisfactory diet for a little child:

"A little child 3 to 6 years of age who is carefully fed in accordance with his bodily needs (as these are now understood) receives every day at least one food from each of the following groups:

1. Milk and dishes made chiefly of milk (most important of the group as regards children's diet); meat, fish, poultry, eggs, and meat substitutes.
2. Bread and other cereal foods.
3. Butter and other wholesome fats.
4. Vegetables and fruits.
5. Simple sweets."

The relation of food to the condition of the bowels is also an important matter. Grains, particularly those containing the outer or branny layers or coats, are laxative; so, too, are such mildly acid fruits as apples, oranges, and grapefruit. So far, therefore, as the important matter of preventing constipation is concerned, coarse grains and mildly acid fruits serve the same purpose. When fruits are to be obtained in abundance, the kind of cereal served is not of great importance. When they are not, the coarser cereals should be used.

### A Quart of Milk a Day.

The basis of a child's diet should be clean whole milk at least a quart a day. Such milk, in addition to water contains about half a cupful of the very best food substances—butterfat, milk sugar, lime, and other materials needed by the child to make muscle, bones, and teeth. In addition milk contains a substance thought to promote growth by helping the body make good use of other foods. Where good whole milk is not obtainable, clean, fresh skim milk supplies these substances with the exception of the butterfat, and is, of course, preferable to dirty or questionable whole milk. Milk however, contains very little iron and therefore spinach and other green vegetables and egg yolks, which are rich in iron, combine well with milk.

The child should drink the milk with the chill taken off, or should consume his full quart a day with cereals and in milk toast, cocoa, milk soups and stews, in cereal puddings, egg-and-milk puddings, custards, junkets, or simple ice creams. Milk stews may be made with vegetables or fish, or to vary the diet these things can be combined with cream sauce and served on milk toast. The bulletin therefore gives a large number of recipes for the preparation of various milk dishes which will help children consume the requisite amount of milk without growing tired of this valuable food. Those for milk soups will be found particularly useful, as they give the mother an easy means of preparing many vegetables which are essentials in the child's diet.

### Bread and Cereals.

Well-baked bread and thoroughly cooked breakfast cereals are both good for children and with milk should make up a large part of the diet. Bread and cereal mushes are to a certain extent interchangeable, but neither can take the place of milk, meat, eggs, fruits, and vegetables. An ordinary slice of bread is equal in food value to about half a cupful of boiled or steamed cereal and about a cupful

### Cut the Cost



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AND ROAD GRADER  
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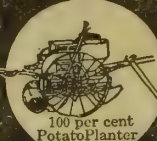

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## High and Level Lift

**PRACTICAL**—the right size for the average farm. Work with any standard tractor. Controlled by the man on the tractor.

Pull the rope and all the bottoms raise high and level. Another pull lets them down.

All bottoms raise high—like a double bail, high lift horse plow. You know from experience what this means. Plows do not clog or gather trash on the turn.

Extra wide and semi-floating front truck means uniform work and even depth of plowing.

Extra beam and bottom, readily attached, increases a regular two-bottom plow to a three bottom or a regular three-bottom plow to a four, as desired.

Famous John Deere Bottoms with Quick Detachable Shares that are taken off and put on in one-fifth the time it takes to change bolted shares. Booklet free.



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1. Beater on the axle—nothing else like it.
2. Revolving Rake—load moving back to beater revolves the rake. Draft actually less. Even spread certain—no bunching.
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with Adjustable Gate Force Feed

**PLANT** any small grain, from alfalfa to bearded oats, corn and peas, even in trash, gumbo or mud. Adjustable gate force feed compels an even, continuous flow through each seed tube.

They are light weight, light draft, well balanced and strong. Frame is rigid; hopper does not sag; the gear drive is positive and the disc bearings are guaranteed to last lifetime of drill. Spring steel scrapers keep discs clean.

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**JOHN DEERE, Moline, Ill.**  
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of flaked or puffed cereal. Different kinds of bread may be used for variety.

The yeast-raised bread given to young children should be at least a day old or should be toasted or twice baked. Hot breads are likely to be swallowed in large pieces and are therefore not desirable. Hot breads which are almost all crust, like thin tea biscuits or crisp rolls, are best of the hot varieties.

### Meat, Fish and Eggs.

Under the heading "Meat, Fish, Poultry, Eggs, and Meat Substitutes," the author states: "In some families children do not get enough meat and eggs; in others they get too much. A good general rule commonly followed is to give a child 2 years old or over an egg every other day and about the same amount (2 ounces) of meat, fish, or poultry on the intervening days. Where meat is omitted, care must be taken to see that other suitable foods take its place—preferably an extra amount of milk and eggs."

Fried meats should not be given to a child, because they are likely to be overcooked and tough and also because the fat may be scorched and thus changed in composition. Scorched fat is almost certain to be hurtful to children.

Meat is best given as broiled chop meat or in simple meat stews combined with vegetables. Poultry may be boiled and served with rice. When roasted, only the tender portions should be fed. Highly seasoned stuffing or rich gravy should not be given to a young child.

Dried and other fish, and oysters, may be used in milk stews. Well-boiled fish is good for variety. Eggs must not be overcooked or they are likely to cause indigestion. The best way to cook eggs is to poach or coddle them. Scrambled eggs may be served occasionally, provided care is taken not to scorch the fat or to overcook the eggs.

### Fatty Foods.

Fat is an important part of the food of children. There is more than an ounce of fat (at least 2½ level table-spoonfuls) in a quart of whole milk. If the healthy child is given a quart of milk, has butter on his bread, and meat or an egg once a day, he gets enough fat, and that which he receives is the wholesome form. It is well, therefore, not to give such fatty foods as pastry, fried meats and vegetables, and doughnuts or rich cakes. If the child is constipated, the occasional use of cream or salad oil is desirable, for fat in abundance is laxative.

Bacon or salt pork, cut very thin and carefully cooked, may be given occasionally. It is very important not to burn the fat.

### Vegetables and Fruits.

Vegetables and fruits are grouped together because they are similar in that both supply iron, lime, and other mineral matters, and also mild acids. Vegetables are an important but often a neglected part of the child's diet. They should be served at least once a day, as they help to keep the bowels in good condition. Fruits are important for their flavoring, for their laxative effects and doubtless for other reasons, and should be served in some form at least once a day. Fruit juices and the pulp of cooked fruit, baked apples and pears, and stewed prunes, are the safest. The child should not

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## Ghirardelli's Ground Chocolate

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be allowed to eat the skins unless they have been made very tender by cooking.

### Simple Sweets.

Sugar is a desirable part of the diet provided it is given in simple sweets and not allowed to take the place of other foods and spoil the child's appetite. Simple sweets are

such things as lump sugar, maple sugar, sirups, honey, and plain candy, and those foods in which sugar is combined in simple forms with fruit juices (in lemonade, water ice, jelly, etc.) with flour or starch, as in plain cakes (cup cake, sponge cake, cookies), and with fruit, as in jams, marmalades, and similar things.



**HOLSTEIN DAY AT RICHMOND**

Holstein cattle ruled the day in Richmond, Utah, on March 17th of this year. Nearly three hundred choice specimens were collected in the Old Tithing Yard, for the inspection of thousands of farmers who had come from far and near to see Richmond's Pride. Present among the crowd were many of Utah's Jersey breeders, but the black and white alone were discussed. It was a splendid sight. The high bred animals, glistening under the bright sun, the good natured, appreciative crowds, the expert judges pointing out the good and bad points in the cows and calves and bulls, the glow in the eyes of the lovers of live stock, the hum of voices and the spring in the air—all this made the occasion one to make the farmer smack his lips.

The Richmond Holstein Breeders' Association under whose auspices the exhibit and the auction were held may remain assured that its efforts made a notable day in Utah's agriculture.

It was good to contemplate, as one first class animal after another was examined, that the high efficiency of the cows as milk producers has been brought about by the use of man's intelligence in breeding for a desired end. The farmer need ever keep in mind that nature is his servant. When some new thing is needed to further man's interest, the thing to do is to search it out, for with certainty it will be at last discovered or produced. The high bred cows of Richmond were attained after much patient effort. It was an inspiration to remember that a little more than ten years ago there were no Holsteins in Richmond. It does not take long to accomplish great things, if the right methods are employed. Richmond adopted correct methods. Many leading citizens decided upon the result to be obtained. They stood together and made co-operation their watchword. Richmond was to be famed as a Holstein center. When a community stands together and knows whether it is going, it becomes irresistible.

Richmond's lesson is for the State. The people of each town must stand together for its main business. Division means inferiority or failure. Moreover, no town gets very far along which does not find some one activity to which it can give the larger part of its energy. Let it be Holsteins or Jerseys, or Percherons or Cotswolds or Berkshires or wheat or potatoes or sugar beets or painted barns or clean streets or the best schools or any other thing—but let there be at least one thing in the town for which it is noted in the State and about which the people can talk with pride. Then, the town is as one made new.

**THE ECONOMY WEEDER**

By J. W. Paxman, Extension Specialist in Dry-Farming for the Utah Agricultural College.

(In making up the paper last week some of the type in this article was transposed. We are running it again in its corrected form. Refer to last weeks copy for cut and description.)

The cuts published in last issue represent the top view of the wood frame and the rear view showing knives of the home-made weeder mentioned in article published in the

January 15th issue of the Utah Farmer.

It will be noticed that there are two distinct cuts, the lower one showing the position on the rear wood frame of the cutting knives together with the shape and angle of the same.

The frame is made of selected Oregon Pine 2 in. x 6 in. bolted together, the end pieces and braces being placed on top of the pieces carrying the knives.

The knives are made of 2½ in. x ¼ in. Plow Steel, cut into 24 inch lengths, 14 inches of which is drawn or smithed to a cutting edge, much the same as a plow share, with two holes for ½ inch bolts in the other end.

The knives are smithed with a curving angle as shown in the cut, so as to avoid any sharp angle on the cutting edge and to better free the rubbish. Eight inches are used for bolting onto the frame; four inches from frame to lower edge of curve, leaving about twelve inches straight cutting edge, with 30 degree angle and tilted forward almost as abruptly as a plow share, so as to force itself into the ground. The rear end of the knife is about two inches below the level of the lower end of the shank or curve. The 8 knives for the front of frame of course, are made to cut precisely the reverse to the rear knives, thus providing no chance of any weeds escaping the knives, as there would be a lap of over five inches on every pair of knives (right and left; or, back and front).

This weeder will cut all weeds and volunteer on the fallow of the dry-farms, when others will fail; but it is not claimed that it will work in all conditions. It does much better work when the surface three or four inches is rather dry and void of wet rubbish. If this cultivator will not free the fallow of weeds and foreign growth, there is little use of trying other weeders. Better give the fallow a light plowing—just deep enough to destroy all the vegetation—and save the time and expense of experimenting with other implements.

There are two clevises with rings provided to hitch onto draw bar. The same draw bar provided for the "Nephi Harrow," or a similar one, can be used for this weeder.

It is designed for five or six horses, using two of the eight foot sections. One section can be used with three horses, or two sections can be made smaller with 12 knives each and drawn with 4 horses. The knives are spaced 13 inches apart on the frame. If the land is rather hard and heavy, ride the harrow or weight it sufficient to force it into the ground the right depth.

We have been persuaded to call this the "ECONOMY WEEDER" because of its utility in coping with the weed proposition, where conditions permit of any kind of a weeding implement.

A supply of salt should be always accessible to cows, either in granulated form or large pieces of rock salt.—Exchange.

Why is a lady dressed for a fashionable ball like a bargain sale?

Because everything is 50 per cent off.

WANTED to hear from owner of good farm for sale. Send description and cash price. R. G. List, Minneapolis, Minn.

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## Tickets On Sale

Nephi and Tintic District and all points East April 4th to 9th inclusive. Return Limit April 12th.

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APRIL 4th and 5th.

SEMI-ANNUAL CONFERENCE

L. D. S. CHURCH, APRIL 6-7-8-9th.

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Birth of a Nation, April 5-6-7-8.

Pantages ..... Vaudeville  
Orpheum ..... Vaudeville

Demonstration Train of the Utah Nevada Agricultural College will be open to the Public April 7th and 8th, 10 cars of Exhibits—Covering every Phase of Ranch and Home Development.

Train will be set at Salt Lake Route Union station South Temple and Third West Street

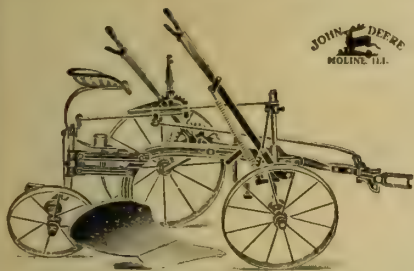
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# Consolidated Wagon & Machine Co.

Will have a big spring Opening from April 3 to April 8, inclusive- It will be one of the biggest attractions, and best display of farm implements that was ever put on in the State of Utah.

All of the latest up-to-date farm machinery will be seen, properly set up, and most of it running.

It will be an attraction that will certainly be worth while for any man interested in farm machinery to see.

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- John Deere Grain Binders with Binder Engine.
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- John Deere Spreaders with the Beater on the axle and with wide spread attachment.
- John Deere R. and V. Gas Engines.
- Dain Side Rakes, Hay Loaders, and Buck Rakes.
- Caterpillar Engines—"Holt makes it."
- Nichols and Shepard Steam Engines.
- Nichols and Shepard Red River Special Threshers.
- Johnston Headers.
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John Deere Grain Binder  
With All Steel, Quick Turn  
Tongue Truck

THE Better Binder. Truck turns machine faster than team turns. Saves time in turning, square corners are made, and full swaths taken at the turns.  
Stub tongue is all steel, hot riveted—no breaking, splitting or rotting. All steel eveners.  
The binder that is noted for its light draft, sure cutting, elevating and tying. Ask for free booklet.

"R & V" Engines  
Dependable Farm Power

"R & V" Triumph—always develops rated horse power—made in 1, 1 1/4, 2 1/2, 4, 6, 8, 10, 12, 16 and 20 H.P. sizes, stationary and portable.  
Easily started; perfect speed control (speed can be varied 40 per cent without stopping engine). Complies with insurance regulations. Hopper cooled—a simple, efficient system that does not require long pipes and numerous fittings. Write for free booklet.

Van Brunt Single Disc  
Grain Drills

with Adjustable Gate Force Feed  
PLANT any small grain, from alfalfa to bearded oats, corn and peas, even in trash, gumbo or mud. Adjustable gate force feed compels an even, continuous flow through each seed tube.  
They are light weight, light draft, well balanced and strong. Frame is rigid; hopper does not sag; the gear drive is positive and the disc bearings are guaranteed to last lifetime of drill. Spring steel scrapers keep discs clean.

John Deere Spreader  
THREE exclusive features:

1. Beater on the axle—nothing else like it.
2. Revolving Rake—load moving back to beater revolves the rake. Draft actually less. Even spread certain—no bunching.
3. Ball Bearing Eccentric Apron Drive. Requires no attention. Performs wonders in the working of the spreader. Write for Booklet.

# Consolidated Wagon & Machine Co.

State Street, Between 1st & 2nd South, Salt Lake City, Utah

MAKE YOURSELF AT HOME AND MAKE OUR STORE YOUR HEADQUARTERS



## DAIRYING

### MILK SANITATION

By W. S. Cunningham.

#### Causes of Souring.

Nearly all changes which occur in milk or its products are due to the action of bacteria. Bacteria are very small microscopic single-celled plants, which are found almost everywhere in nature. They are most abundant where there is dust and filth; and multiply very rapidly, the resulting progeny of one bacterium often amounting to many million in twenty-four hours. Milk is an ideal medium in which bacteria can grow, and if it is kept warm they develop very rapidly, feeding on the milk sugar and converting it into lactic acid. The acid causes the milk to become sour and curdles or precipitates the curd or casein.

#### Keeping Down the Count

Bacteria grows very slowly or not at all at low temperatures. Since all freshly drawn milk contains bacteria, it is important that it should be cooled quickly to forty or fifty degrees, to prevent their development. Or if the milk is separated, the cream should be cooled if it is desired to keep it sweet. Milk in the cow's udder usually contains some bacteria, but far the larger number get into milk through dust in the stable, hairs from the cows and unclean milker, particles of manure that fall into the milk, or unclean utensils. To limit the number of bacteria which get into milk the cows should be milked in a clean, well lighted and well ventilated stable. The cows should be well groomed and their flanks and udder dampened before they are milked. The milker should wear a clean suit and have clean hands. The teats should never be wet while milking. To avoid dust in the stable, it is well to sprinkle the floor lightly and feed no hay until after the cows are milked.

#### Caring for the Milk

The milk should be removed from the stable as quickly as possible to the milk room. This room should be light and airy and entirely separate from the stable. If the gravity method of separating the cream is used the milk should be cooled quickly to 40 to 50 degrees F. There are three different forms of the gravity system: the "shallow pan or crock," the "deep setting," and the "water dilution." The last mentioned is not worthy of discussion, as it is wasteful and inefficient. Of the other two methods, the "deep setting" is the more satisfactory. It consists of a deep, narrow can, sometimes called a shotgun can, which is set in cold water. When the cream rises it can be removed with a ladle or dipper. The cream rises in it more quickly and more thoroughly than in the "shallow pan" system, which consists of putting milk into pans or crocks.

#### The Cream Separator

For a person keeping five or more cows, it is economy to own a hand separator. According to the Purdue Experiment Station, by using a cream separator there is a saving of \$3.50 to \$7.00 per cow per year, over the gravity system. Besides a more thorough skimming, the centrifugal separator produces a better quality of cream and a more satisfactory

thickness, removes many bacteria and other impurities, and produces a skim milk in good condition for feeding. If a separator is used, the milk should be separated while still warm, as the separator has its greatest efficiency if the milk has a temperature of 90 to 95 degrees F.

#### Caring for the Cream

If the cream is to be held for several days before churning, it should be kept in a can with a clean cloth tied over the top, to keep out the dust. It should not be subjected to odors of any kind, as cream and milk absorb odors very readily. If milk or cream is kept in the same compartment of a refrigerator with meat, vegetables or fruit, it will take on strong odors and tastes, which are often mistaken for a sour or impure product. No new cream should be added to the old until it has been thoroughly cooled.

#### The Utensils

Oftentimes buckets, strainers and other utensils have crevices and corners in which milk and dirt may lodge and become the source of numberless bacteria and bad odors. This may be avoided by using only vessels which have no sharp corners and in which all crevices have been filled with solder. The cream separator, if not properly cleaned, is also a source of bacteria; though if properly cared for it will eliminate part of the bacteria from the milk and cream. It should be carefully washed and aired after each separation.

#### Washing

In washing separators and other milk utensils, it is well to observe the following rules: First, rinse the parts in clear, lukewarm water; then wash in hot water, using washing powder. Rinse in warm water, and sterilize by holding over live steam or dipping in boiling water. Set where the parts may drain well, and dry by evaporation. Never wipe them dry with a cloth, as most drying cloths are infested with bacteria. If possible, put them where they will be exposed to the direct rays of the sunlight, as sunlight is a great germicide.

### FEEDING THE DAIRY CALF.

J. B. McNulty, Colorado.

Among the various methods by which dairymen are hoping to increase their butter fat production, there is none more practical, more fundamental than that of rearing calves from the best producing cows. In view of this fact, the dairyman finds himself confronted with the following problems:

First. What shall I feed in order to enable me to raise the largest percentage of my calves?

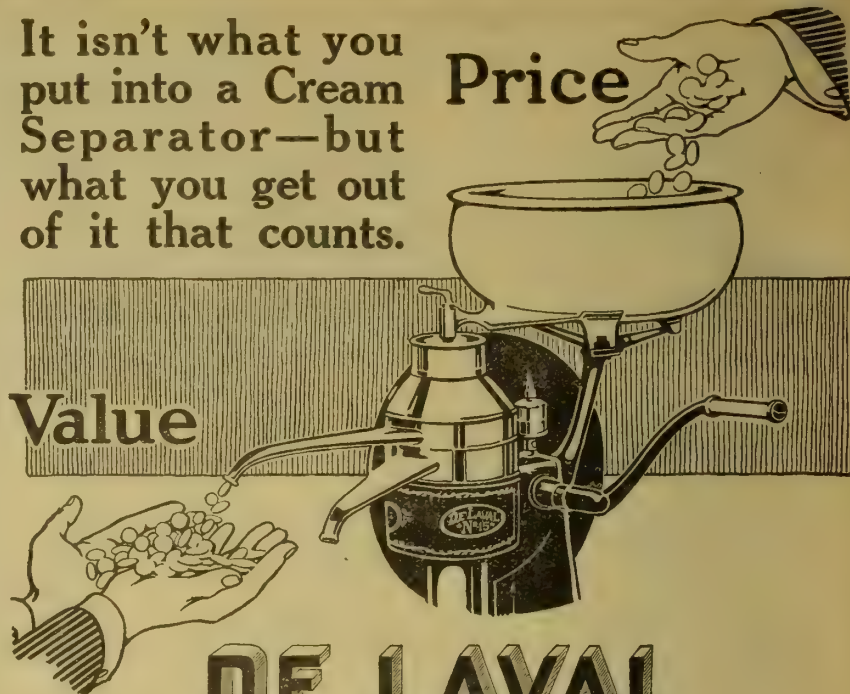
Second. What shall I feed in order to grow strong, vigorous and thrifty calves most economically?

The real object to be sought, is that of a combination of feeds, such as will result in a ration corresponding to that furnished in whole milk and at the same time be more economical. Those engaged in dairying usually have skim milk at their disposal, and their great problem is in regard to the choice of concentrates and roughages to be fed with the above by-product.

It isn't what you put into a Cream Separator—but what you get out of it that counts.

Price

Value



**DE LAVAL**  
Cream Separators  
are by far the  
most economical

**R**EAL economy is never short-sighted. It never confuses PRICE with VALUE.

PRICE is what you pay for an article—what you put into it.

Value depends upon the amount and quality of service the article gives you—what you get out of it.

You get by far the greatest actual VALUE for your money when you buy a De Laval—BECAUSE it will give you much better and longer SERVICE than any other separator.

From the standpoint of its greater durability alone the De Laval is the most economical cream separator to buy, and when you also take into consideration its cleaner skimming, easier running, greater capacity and less cost for repairs, the price of the "cheapest" machine on the market is most exorbitant compared with that of the De Laval.

And there is no reason why you should let its FIRST COST stand in the way either, because the De Laval may be purchased on such liberal terms that it will actually pay for itself out of its own savings.

A De Laval catalog to be had for the asking tells more fully why the De Laval is the most economical cream separator, or the nearest local De Laval agent will be glad to explain this and many other points of De Laval superiority. If you don't know the nearest local agent, simply write the nearest De Laval main office as below.

**THE DE LAVAL SEPARATOR CO.**

165 Broadway, New York

29 E. Madison St., Chicago

50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER

Skim milk may be defined as milk without fat. It is a trifle higher in sugar and protein than whole milk itself. Consequently, the grain or concentrate which will best supplement skim milk is the one which supplies the missing nutrient, viz., "fat." Corn, barley or a mixture of both, are the concentrates that will come the nearest to fulfilling this requirement. Occasionally a feeder has skim milk or alfalfa on hand, and to these he adds linseed meal cottonseed meal or gluten feed. These three concentrates are all very high in protein and when any one of them is combined

with skim milk and alfalfa—both of which are high in protein—an unbalanced ration results and scours or other digestive disorders of a more or less fatal nature follow.

Oats are a very good supplement to skim milk. They may be combined with either barley or bran. The expensiveness of oats, however, accounts for their being little used.

In any case the amount of protein-rich concentrates that can be safely and profitably fed with skim milk will depend upon the roughage fed. Calves limited to corn stover, oat

(Continued on page 17)



## Farm Management Demonstrations

By E. B. Brossard, Farm Management Demonstration Agent for the State of Utah.

Farming in Utah is a business. It is being scrutinized more carefully today than ever before in its history. Today Farm Profits are considered to a greater extent than at any previous time in the history of the State.

Agriculture in this State at one time meant merely the making of a living for a family from the soil. Today in addition to making a living from the soil each farmer figures that he must make a reasonable per cent of interest on all his capital investment and also a Labor Income (or Wages).

The sixty-three farm business records; taken in Monroe Area Sevier County last year covering the year 1914, ending January 1st, 1915, show that the average farmer in that area for that year made as his Labor Income \$516.00, besides paying interest at 5 per cent on an average capital of \$10,668.00. In addition this farmer receives considerably more from his farm towards his family living than the primitive Utah farmer. His farm produces practically all of the milk, butter, meat, eggs, vegetables, fruits, etc., that the family consumes. It furnishes him a house in which to live, much better than the early farmer had, and vehicles, driving horses or automobiles for his pleasure. The early farmer in Utah had but few privileges in comparison to those of the Utah farmer of today.

This statement shows that on the average the farmers in the Monroe Area, Sevier County, 1914 made good money, and were able to enjoy the freedom of the out-of-doors, and the privilege of being their own boss.

Agricultural development however, has by no means reached its climax. There is much to be done in order for our farms to produce the maximum profits. The business of farming has a wonderful future in this state. It has a wonderful future in the Monroe Area of Sevier County as will be readily seen when one knows that ten farmers in that area in 1914 made on the average Labor Incomes of \$1,787.00. This is \$1,271.00 more than the average farmer in that district made in the same year.

The climate and soil conditions are practically the same on these farms. The difference in the Labor Income as here shown is due very largely to the difference in the type of farming that is practiced or the diversity of the farm organization, the quality of business that is carried on and the respective farms and the difference in the magnitude of Size of the Farm business. Perhaps the later factor, Size of Business plays the greater part in making this great difference in the Labor Incomes on these farms.

The better paying farms had on the average a much larger business than the average farm. They had an average, Capital of \$17,386.00, Total Acres 104, Total Crop Acres 74, Total No. of Acres in Alfalfa 50, Total No. Milch Cows 10, Total No. of Animal Units 73. This may be taken as a reasonably profitable Size of Business in Monroe, Sevier County.

The Size of Business is not the only factor, however, which affects Farm Profits. The Diversity of Business is a very important factor. These better paying farms had on the aver-

age 6.9 sources of income. They grew, on the average 4.8 different crops and they had on the average for each of these farms 2 main sources of income which equalled 10 per cent of their total gross receipts. These sources were cattle, and sheep. This shows that the live-stock business either cattle and sheep or cattle or sheep, was the best diversity of business practiced on those farms.

It shows further that the crops to feed these live-stock should be grown on the farm, whenever possible. The number of sources of income shows that not only did the farmers have one or two main sources of income which were sheep and cattle, but they had practically five other sources of income which of course filled up the year with productive labor and afforded the farmer and his team and machinery something to do which produced profit at times when his attention was not wholly absorbed by his livestock interests.

Many large farms that are well diversified fail because of a poor Quality of Business. It seems necessary, in order to make a good Labor Income on the farms in this area or in any other area, to maintain a good quality of business. The crops must have produced yields per acre that are at least average yields and should be to make the most money, a little better than the average. The crop yields in the Monroe Area on the ten better paying farms were just average. The livestock receipts per \$100.00 feed fed amounted to \$178.60. This shows a very good profit on these better paying farms from the livestock. It shows also that feeding crops to livestock paid considerably better than crops sold would have done if they had been sold at the average price for the year 1914.

The Quality of Labor done on the larger and better paying farms is shown to be considerably better. The miscellaneous receipts per man were \$159.85. The Animal Units per man \$33.31. Crop acres per man \$33.77. Crop Acres per horse \$14.21. These figures show what each man did on the farm and how much he made by working off the farm with his farm machinery, horses, etc. It also shows how many acres each work horse in the Monroe Area was responsible for the cultivation of.

These figures show perhaps, that on a larger farm both man labor and horse labor are employed more efficiently by the use of improved machinery which the smaller farmer cannot afford and which to the larger farmer are essential to the most economic management of his business.

Mr. Lorin A. Merrill, Sevier County Agricultural Agent, has charge of this Farm Management Demonstration Work in that County. He is largely responsible for the very successful demonstrations that were made last year throughout his county. He is taking up the Farm Management Demonstration work again this year and expects to co-operate with the same sixty-six farmers who so heartily co-operated with him the past year. Already about half of these farm business records have been retaken for the year 1915.

(Continued on page 15)

## Home Study Course of Piano Lessons

Just Published

### The Utah Conservatory of Music

announces the publication of

### Prof. J. J. McClellan's Written, Home Study Course of Piano Lessons

The Course is systematic methodical, and covers 15 years of Prof. McClellan's practical teaching experience. The student covers two years' work in one year's time. Recommended to all earnest students of music and teachers by the best music authorities in the state.

We also have written courses for Band Instruments.

Our course of studies include Piano, Organ, Voice, Violin, Dramatic Art and Band Instructions.

You will save both time and money if you will write us a card or letter, we will then tell you all about this course of Piano studies.

Send us your name and address we want to tell you more about this splendid course of studies written by Prof. J. J. McClellan.

## Utah Conservatory of Music

Templeton Building

Salt Lake City Utah



# An Argument for Good Roads

(Continued from page 3)

They materially aid in answering the questions of the farmer: Why can't we make both ends meet, why are we not able to live in comfort, why is the balance on the wrong side of the ledger, etc.?

The Good Roads Movement in the country today has reached mammoth proportions and like "Safety First" is the slogan of the age. It is the spirit of the twentieth century, the impassioned cry of the nation. Any community which is not interested in the nation-wide movement is not progressive. It is dead and should be buried! Someone defined progress as the measure of man's ability to shorten the minutes between mile stones—we must get there at any cost! Are you progressive, are you alive, are you interested in the good roads movement?

There are two distinct types of highways, viz:— permanent, or hard surface type, and the non-permanent, such as earth, gravel, etc. The permanent type, first of all, is that type which is being advocated by all those interested in the Good Roads Movement, it is the type upon which maintenance, it is the type upon that this item may be neglected; it is the type which will outlive the life of the Boards responsible for its existence, and which is serviceable three hundred and sixty five days of the year; it is the type which will survive the effects of, and stand up under, the heaviest of automobile traffic, as well as the requirements for horse drawn vehicles; it is the type which offers low resistance to all kinds of traffic, and it is the one type upon which the U. S. Government claims costs of but five to ten cents to move a load of one ton a distance of one mile.

The non-permanent type, first of all, is that type which was designated for traffic conditions that existed centuries ago; it is that type which will not outlive the life of the Boards responsible for its existence, and which is not serviceable three hundred and sixty five days of the year; it is the type which was never intended, and cannot survive the effects of, or stand up under, traffic conditions in vogue today, it is the type which offers high resistance to all kinds of traffic; the type which renders travelling a hardship instead of a pleasure, and concerning which the government claims costs of not from five to ten cents, as upon the hard surfaced type, but from twenty to forty cents to haul a load of one ton over a distance of one mile.

Mr. Tax Payer, what type of roads are being built in your community; or possibly it requires all of the money which you can raise for road purposes to keep a fairly passable condition the old roads which you already have, those roads built by your fathers, your grandfathers, or perhaps even the Indians years ago, so that you are unable to build new roads, open up new lines of travel, and thereby completely develop all of your resources.

Suppose, for example, that your fathers and grandfathers instead of building those so called non-permanent, unimproved highways, which today are absorbing practically all of the funds which you can raise for road purposes in order to keep them in

passably good condition, had constructed in their stead the permanent type—the hard surface pavement—then, Mr. Tax Payer, instead of putting your hard earned dollars and cents into a seive-like pocket—and having nothing to show for your money, you would be using it for a definite purpose, you would be obtaining results that were visible to the eye, for then you would be building new highways—new lines of travel through your community.

Don't think for one moment that you cannot afford to construct permanent or hard surface highways. The following example will show very plainly that the cost in hauling alone on a hard surfaced highway will not only pay for itself, but net an appreciable profit besides—will prove that this type of construction represents a far-sighted investment, of the first order. Let us compare the cost of hauling on and ordinary un-improved road with the hard surfaced highway, the cost of hauling to include the cost of road. We will suppose, Mr. Tax Payer, that you own 10 acres of land in a certain county assessed at \$30,000,000.00. Furthermore, the county has one main highway running through it which is 25 miles long, you live on the highway and must transport your produce a distance of seven miles to the market, or the railroad siding as the case might be. We will further assume that your land is worth \$100.00 per acre, and yields a marketable output of three tons per acre.

First of all we will compute the cost of 25 miles of permanent highway to be covered by twenty year sinking fund bonds, because since a permanent highway will last from thirty to fifty years a bond issue will permit of your children to help pay for it, as is only fair.

25 Miles permanent highways at	
\$12,000.00 per mile.....	\$300,000.00
Interest on \$300,000.00 at 5 per cent	
annum .....	\$15,000.00
Amount to raise each year so to	
accumulate \$300,000.00 at end of	
20 years, or sinking fund (3 per	
cent compound interest).....	\$11,666.00
Maintenance cost, 25 miles at \$30.00	
per mile (16 ft. wide).....	\$ 750.00
Total amount to raise each year for	
20 years .....	\$ 26,916.00

For a county assessed at \$30,000,000 to raise each year an amount of \$26,916 means an increased tax of approximately 9-10 mills, or 9 cents on each \$100.00 worth of property. This is the cost in actual dollars and cents; is it worth it? Let us see.

Referring to the example at hand, 10 acres of ground at \$100.00 per acre is worth \$1000 and on account of the improved road the tax will be increased 90 cents.

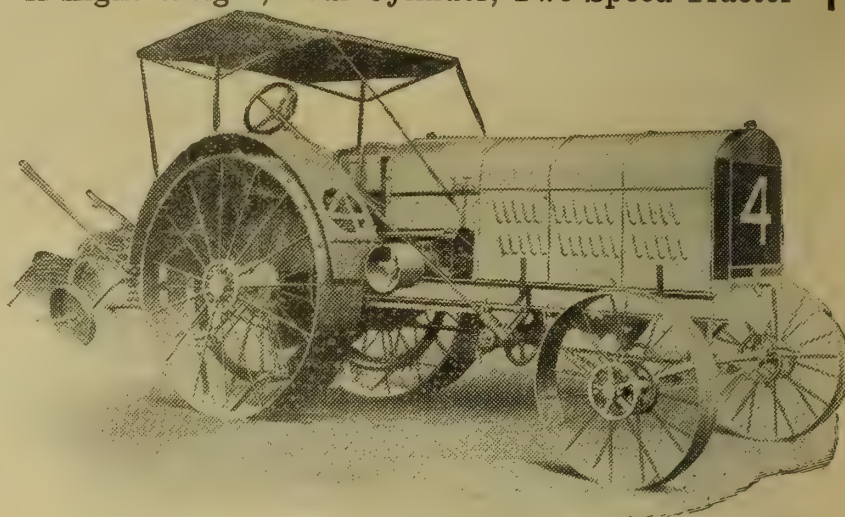
According to the government's figures it costs from 5 to 10 cents to move a ton of produce over a mile of hard surface highway, so we have, using an average of 7½ per ton miles. 10 acres, 3 tons per acre, 7 miles at

7½ cents per mile.....	\$15.75
Cost of road charged to the 10 acres	.90
Cost each year to market goods on permanent road .....	\$16.65

We will now see how much it would cost to market the same produce on the non-permanent highway, assuming that the non-permanent road does not

## The Big Four "20" Tractor

A Light Weight, Four Cylinder, Two Speed Tractor



### The Big Four "20" Farm Tractor

HERE is the outfit that will plow all your land. No more fence corners and headlands left unplowed if you use the

### Big Four "20" and Emerson Power Lifted Plow

A combination of Tractor and Plow—Each made to work with the other. The power of the motor rises or lowers the plow whenever you push the lever, whether Tractor is moving or standing still.

For further information write

## MILLER-CAHOON COMPANY

Murray, Utah

Idaho Falls, Idaho

## How Drudgery Is Avoided On the Farm



"Just because she's a farmer's wife she doesn't love drudgery." Women on the farm are just as up-to-date as those living in the city. Labor savers about their homes prove this fact. Very few bake their own bread. They order

## ROYAL TABLE QUEEN "The Perfect Bread"

along with their daily groceries. They find it more economical to use this perfect bread, and the whole family enjoys its goodness. It saves "mother" so much drudgery and gives her more time for pleasure.

Are you saving the labels and wrappers from Royal Table Queen Bread for the valuable premiums offered by us? If not start today, and you'll save the cost of the bread your family eats. Ask your grocer.



**Royal Baking Co., Salt Lake City, Utah**



## RELIABLE FARM BARGAINS.

Now is the time to see the land if you expect to buy a farm this coming year.

We have a great number of bargains on our list, a few of which are listed below.

215 acres in the Bear River valley; 225 acre feet of water; good house and outbuildings; one mile from the railroad station and beet dump. One of the greatest bargains we have ever offered; \$52 per acre. Small payment down and let the farm pay for itself. Part of this land will rent for \$18 per acre per year.

160 acres; first-class water right from the Bear River canal; 8-room house; large barn; all surrounded with beautiful trees; nice orchard on the place. One of the best farms in Elwood. Price \$135 per acre. Good terms.

92½ acres; 20 acre feet of water; in the city limits of Corinne; comes under the new drainage district; entitled to city water for domestic purposes; ground is all fenced and leveled; a beautiful farm in a good location, to exchange for Salt Lake City property. Price \$60 per acre.

2½ acres on 15th South and 3rd East; good water right, and in fine location; \$1275; 10 per cent down and 10 per cent a year. All to be paid in six years.

We have several one-acre tracts on 16th South and 9th East, with modern improvements; good water for irrigation; city water for domestic purposes; electric lights, telephone, beautiful garden. Land sold on easy terms; \$500 per acre.

Phone—Wasatch 963.  
KIMBALL and RICHARDS  
"Land Merchants."  
56 and 58 Main St.,  
Salt Lake City, Utah.

Plenty of money to loan on northern Utah and southern Idaho improved farms.

## You May Determine Your Own Health

To a great extent you determine good or poor health by your selection of pure or impure foods.

If you are satisfied with any kind of food, you jeopardize your health. But if you demand articles of food, which you have every reason to believe are pure, you protect your health.

Adopt the latter policy; it's the sensible thing to do, and will prove economical in the long run. When you buy sugar, remember that Utah-Idaho Sugar is absolutely Pure, and will accomplish perfect results in cooking and for sweetening purposes.

Buy it by the sack.

**UTAH-IDAHO SUGAR**  
ABSOLUTELY PURE

cost a cent, using the government's average cost of 30 cents per ton mile. 10, acres, three ton per acre, 7 miles at 30 cents per ton mile.....\$63.00

Cost each year to market goods on non-permanent roads .....\$63.00 the difference being \$46.35 in favor of the hard surface, or permanent type of pavement. Since the pavement costs but 90 cents, Mr. Tax Payer, you have a net gain of \$45.45, now then, is it a losing game, or not? The one big outstanding point is, CAN YOU AFFORD NOT TO HAVE A HARD SURFACE OR PERMANENT HIGHWAY IN YOUR COUNTY, RUNNING FROM ONE END TO THE OTHER?

In making the above calculations for the hard surfaced pavement we used a figure of \$12.00 per mile for first cost, (this for a road 16 ft. in width) and \$30.00 per mile per year for maintenance. As a matter of fact there is but one type of permanent highway which has been built for this low figure, and which has been maintained for the almost magical amount of \$30.00 per mile per year, and that is the concrete highway. It is the only type of permanent road construction within reach of the people. Other types will range in price from \$17,000 to \$27,000 per mile with considerably higher costs for up-keep.

The concrete pavement or highway is the type which the Utah State Road Commission has been constructing in the state for the last three years; it is the type being used by the citizens of Salt Lake County, the cities of Provo, Logan, Park City, etc., and why? Simply because the concrete pavement is the most economical from all view points.

The fact that there are over 50,000,000 square yards of concrete pavement in the United States, some of which is in its 24th year of service and upon which there has been a maintenance cost of less than one half a cent per square yard per year is ample proof that this particular pavement is the one crowning achievement of the Road Building Science.

Over twenty years of service with this type of pavement has proven it durable, sanitary, dustless, not slippery, suitable for both horse drawn and motor vehicles, low in cost of maintenance, and in good condition 265 days of the year. This type of road is not patented, is simple in construction, and can be built from materials found in almost every state in the Union. Therefore, it is a Home Product, and may be justly called the Tax Payers Road. Briefly stated, the construction of a concrete highway consists in placing upon a previously prepared and thoroughly compacted sub-base a wet mixture of Portland Cement, sand and stone. It hardens into as much solid rock.

The success of city streets that have withstood so many years of heavy traffic can be traced to the use of this concrete base. By a slight increase in the amount of motor and by care in a few details necessary in the successful construction of the concrete highway, concrete that is used for the base, may be used as a wearing surface, so that for the same amount of money, almost double the amount of street can be paved.

It should be the duty of every tax paying citizen to investigate for himself the truth of the above remarks, relative to economic Road Construction.

# YOU DON'T NEED

to know anything about the quality of wool fabrics, when you pick out a Dundee Suit. Our wools are all carefully selected by men who know.

Tell us your clothes desires—we have the pattern you want, and will help you design a style according to your own ideas.

UNION  To your  
MADE order

Our customers come back—They're satisfied.

*Dundee*  
WOOLEN MILLS

215 South Main Street

Salt Lake City

## GRASS SEEDS

## CLOVERS

## SEED GRAIN

Everything for the modern  
Successful Farmer

Write today for samples and prices

**BAILEY & SONS CO.**  
RELIABLE SEEDSMEN  
SALT LAKE CITY, UTAH



## To Our Patrons in the Inter- Mountain Region

### The McCormick Line

McCormick Corn Binders,  
McCormick Grain Binders,  
McCormick Header-Binders,  
McCormick Headers,  
McCormick Reaper-Threshers,  
McCormick Reapers,  
McCormick Mowers,  
McCormick Hay Rakes,  
McCormick Spring Tooth Har-  
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Osborne Disc Harrows,  
Osborne Peg Tooth Harrows,  
New Cloverleaf Manure  
Spreaders,

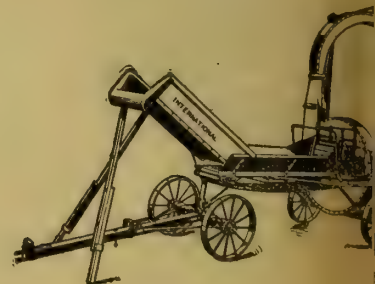
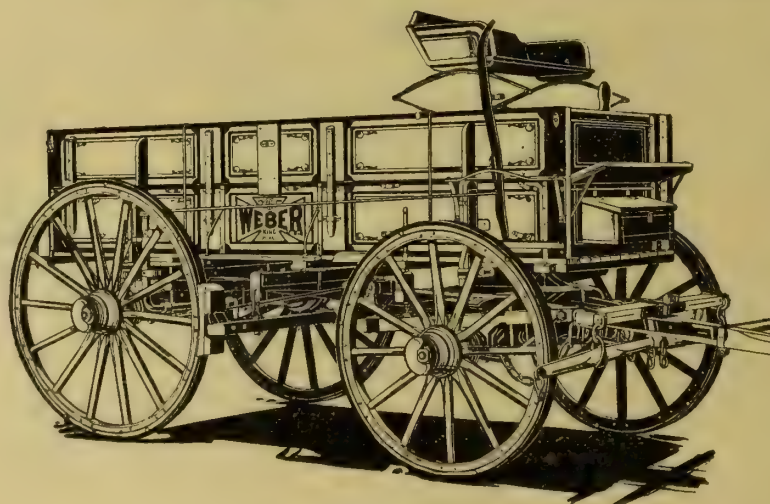
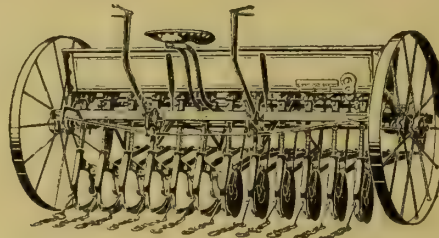
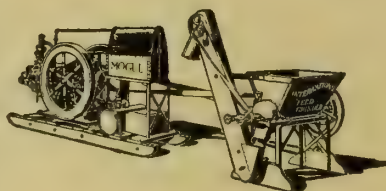
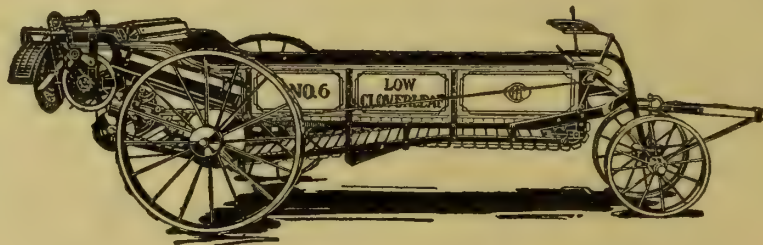
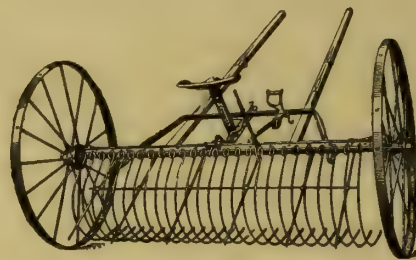
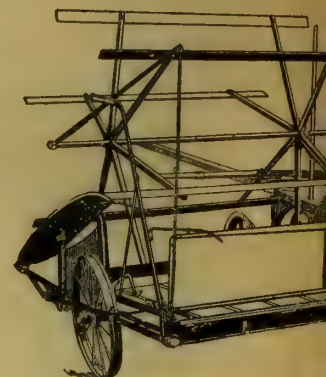
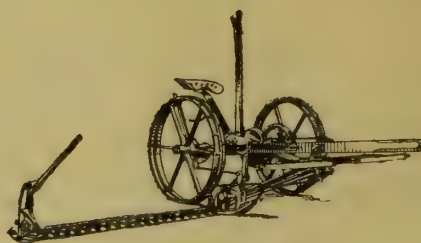
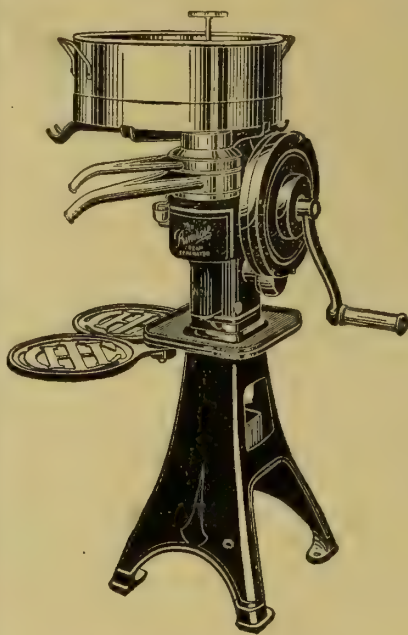
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Mogul Line Oil Tractors,

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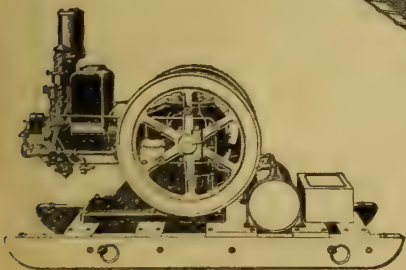
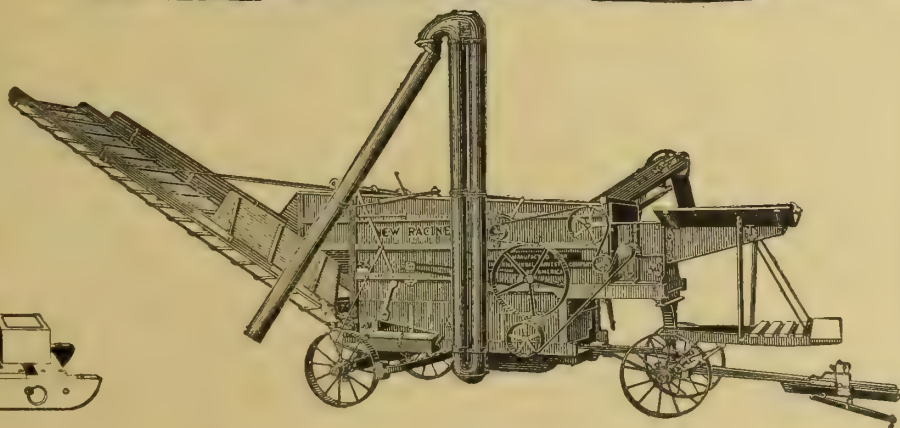
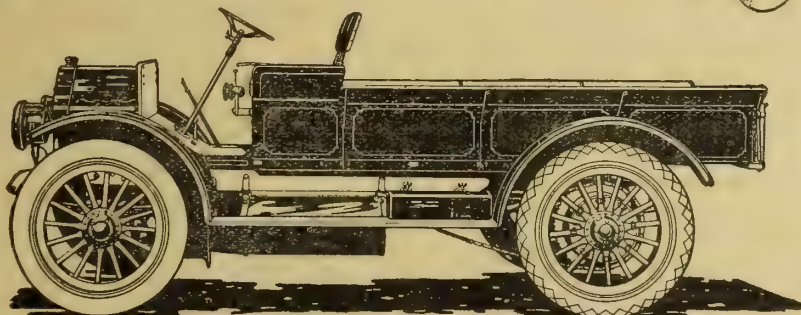
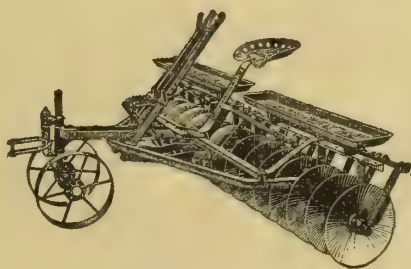
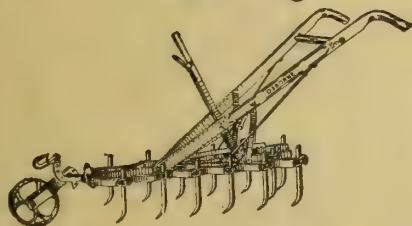
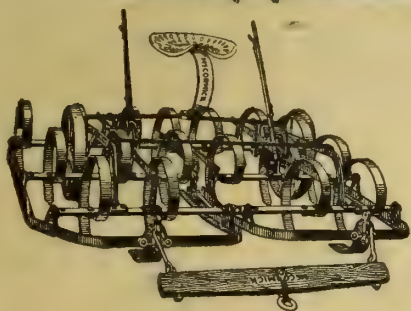
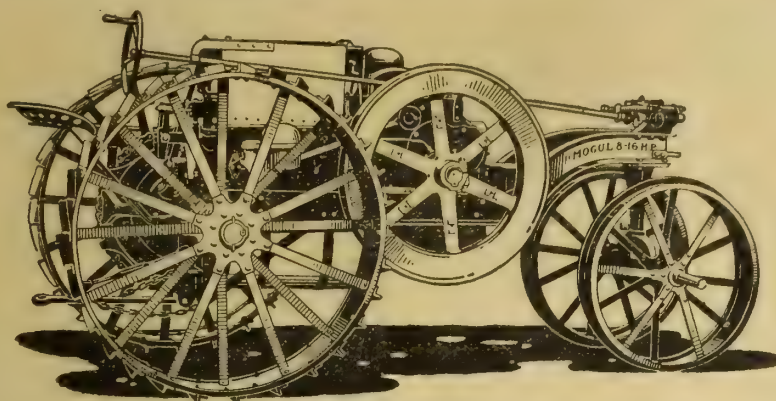
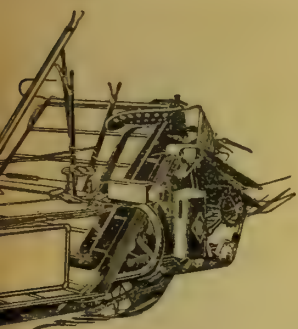
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## Pumping for Irrigation in Utah

(Continued from page 3)

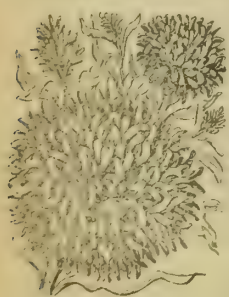
tion, so expensive as to be almost prohibitive for the near future, except in a few cases. Hence it follows that the use of the pump for irrigation seems to be the problem with which we should concern ourselves in obtaining water for immediate development.

Already, some of the more enterprising individuals and communities have made use of the pump with unquestioned success. In general, however, this means of securing a permanent water supply has not been adopted.

During the past two years a quiet investigation has been under way in the State to get a footing for the establishment of a more vigorous campaign in developing the pumping industry. In this great move for the expansion of Utah's irrigated area, the following have been co-operating:

The Division of Irrigation Investigations under Mr. Samuel Fortier, U. S. Department of Agriculture; the Utah Agricultural College through the Extension Division and the Experiment Station; the State Conservation Commission; the State Land Board; and various business institutions interested in the development of the State. Funds necessary for carrying on the work as extensively as its importance seems to warrant, have not been available, hence the necessity of bringing in so many parties to the co-operation.

The results accomplished thus far have served to create an interest to the extent that much more support may be expected for these investigations in the future.



### The Chinese Woolflower

introduced by us last year has proved a great success everywhere and a most wonderful floral novelty. It is a *Celosia* of new form and easy growth. Plants throw out scores of branches bearing balls of crimson wool nearly a foot thick. Also many laterals with smaller heads, and fresh green foliage. Flowers form in June but none fade before frost, continuing to expand and glow with its wonderful crimson-scarlet color, very showy and succeeds anywhere.

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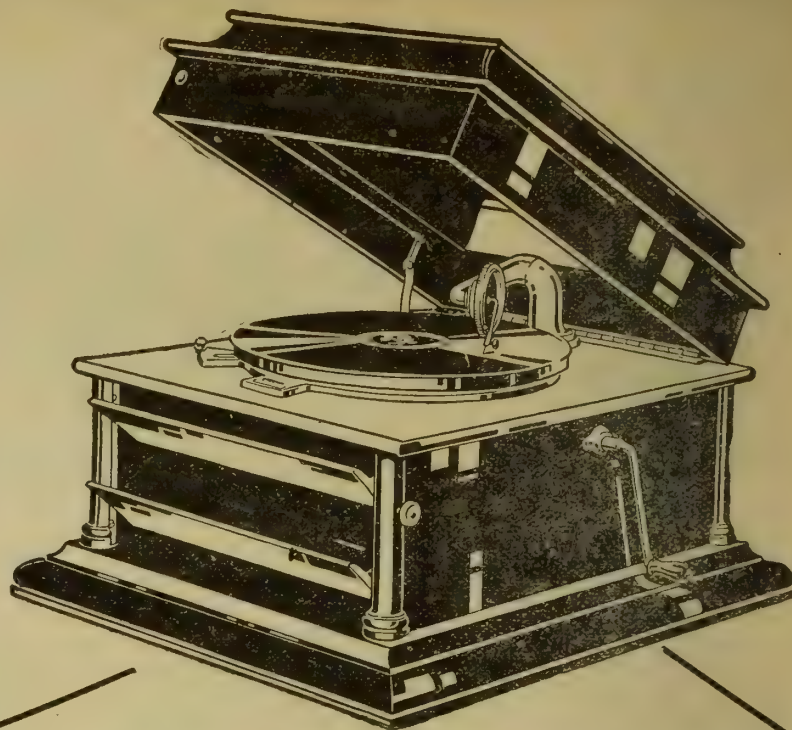


Even with the very limited amount of investigation and demonstration which has been done, a wide-spread interest is manifest in pumping throughout the State. In fact the demand for information as regards the availability of water supply, the cost of pumping, etc., is far in excess of the supply of reliable data which have been collected.

The solution of the irrigation problem by means of the pump involves, many times, problems which are much more complicated than the mere installation of a plant which will give effective and efficient service. For example, one community has fifteen thousand acres of well irrigated land and forty thousand acres for which there is no water, except that a very small portion has a high water right. The irrigated area is covered by several canal systems, one above another, and in one instance one canal crosses several of the other canals. Each canal is operated and controlled by separate canal companies. The companies holding the lower lands claim the primary right on the stream, which means in some cases, all the water during low water time when it is most needed. At the same time, these lower lands are often too wet for the maximum production of crops. Thus it is seen that the water is held where it is least needed. There is ample water, if properly distributed, for the entire irrigated area, and by pumping from springs and wells the majority of the old rights may be replaced and the entire stream now held on these lower lands may in this way be released for the development of a large part of the forty thousand acres which now lie high and dry. From a community standpoint it will be false economy to pump for the irrigation of these new lands, since they are far removed from the underground water and from the natural springs which come out in the lower lands. The logical solution of this problem is the consolidation of the interests of this community, which will result in carrying the gravity streams in two main high line canals covering all the lands on both sides of the stream, and in supplying by means of the pump, water for the irrigation of such of the lower lands as need irrigation. In this connection, the old water wheels which turn certain small mills low down on the streams, must of necessity be replaced by the electric motor, as the rights maintained by these old mills are a menace to the proper distribution of the water in the gravity streams.

This example is but one of many which exist in the state of Utah, and is cited to show the real situation with which those interested in the State's development are confronted. The problem is not merely the simple proposition of installing a pumping plant, but is much more far-reaching in that it has to do many times with the complete reorganization of a conglomeration of irrigation ditches and canals in establishing an efficient irrigation system.

In other sections of the State, and in individual cases, the problem is much more simple. Here we have merely to determine the water sup-



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ply—the limit of profitable pumping—and the area which may be served. Into this class falls the desert areas far removed from natural streams, the areas along streams where unappropriated waters are available, and individual farms where wells may be dug or springs are available as a source of supply.

Pumping is naturally conducive to an economic use of water, since the user must pay for each irrigation in proportion to the water he uses. This will eventually have a very marked effect in producing economy in the use of gravity streams, and thus the development of pumping will serve, not only to increase the irrigated area by an amount actually covered by the pump, but will serve the greater end of showing how crops may be produced with much smaller quantities of water than are ordinarily applied. In this way a great volume of water from gravity streams may eventually be released for use on new lands.

That small quantities of water will give the desired results, has been clearly demonstrated at the farms under the pumping plants operated by the above named co-operators. On these farms a maximum application of nine acre inches was made during the dry season of 1915, while but six acre inches was found to give tilling results, even on these desert lands where the rainfall is very light during any part of the year.

In this work it was found that a single application of two acre inches properly distributed served to moisten the soil thoroughly to depth of ten feet, the maximum depth from which moisture determinations were made.

If crops may be successfully grown by the use of such small quantities of water in supplement to the natural limited rainfall, the cost per acre of pumping will fall far below that ordinarily figured, and therefore, the height through which water may be raised profitably may be greatly increased. These facts, together with prospects of underground water supply, indicate that most of Utah's available agricultural lands may eventually be placed under irrigation in one form or another.

It is generally conceded that electricity is the best form of energy for use in pumping. Furthermore, electric power should be, and generally is, much cheaper than oil or gasoline power. These things considered, the motor should be used where possible, and the gas or the oil engine should have but a temporary place in the pumping equipment where electricity is not yet available. In this connection, where a gas or oil engine is required, the oil engine should be selected, since it may be operated at a much smaller expense, due to the high price of gasoline.

With the increase in demand for electricity there should be, in Utah, a decrease in the unit cost of power to the consumer, since there is much room for increasing the supply, and the cost of distribution is nearly as great for a small number of users as for a large number in the same vicinity.

In developing this great movement of increasing Utah's irrigated area, the public officers representing the co-operate interests involved, solicit the aid of any and all individuals engineers, farmers, business organizations, etc., to the end of developing

the state of Utah to its greatest agricultural possibilities by utilizing every source of water supply to their fullest capacity in irrigating lands, which are naturally rich and fertile, but require irrigation to make them suitable as homes for a prosperous people.

FARM MANAGEMENT  
DEMONSTRATIONS

(Continued from page 9)

The sixty-six farmers who have so generously given their farm business records and who are co-operating in this Farm Management Demonstration have shown a magnificent spirit of broad mindedness and co-operation. Their records have been kept confidential and have been returned to them. They are glad to co-operate again this year as they now see the great advantage to them of such co-operation. They are desirous of stopping the "leaks" in their farm business. Each man is planning to keep a record of his farm business for the year 1916 in the farmers account book which he has obtained from Mr. Merrill. Mr. Merrill will be glad to assist any and all of the farmers to keep a record of their farm business. He has made this business farming or Farm Management Demonstrations one of his major projects for this years work. The farmers throughout his county will be glad to take advantage of this opportunity and learn to keep records of their farm business, so that they might stop the "leaks" in it and thus increase their Labor Incomes.

The information obtained from the records thus taken at Monroe is available to every farmer in Sevier County. Mr. Merrill will be pleased to assist any man in the reorganization of his farm business if he has a detailed business record kept so that the Efficiency Factors can be calculated, and determined, this will then show the profitable and unprofitable enter-

prises and will suggest to all progressive farmers the elimination of the unprofitable ones.

The farmer drove into town and hitched his team to a telegraph pole.

In Southwestern Idaho

160 acres all under cultivation. Splendid soil and good water right. Well improved. Six room brick house and good outbuildings. An up to the minute place in a growing community. Fully equipped for \$12,000. Terms.

120 acres near Oakley. 40 shares water in Canal Company. 80 acres dry. Good house. Grow beets, grain, potatoes, etc., \$1800—\$1000 cash, balance terms.

117 acres, thoroughly modern and up to date place fully equipped, in same section as above. Only \$12,000. Water alone worth \$6000.

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Utah Horticultural Society, Utah State Dairymen's Association, Utah State Bee Keepers' Association, Bear River Valley Farmers' Protective and Commercial Association, Agricultural College Extension Department and Utah State Fair Association, Utah-Idaho Millers' and Grain Dealers' Association, Utah Fruit Growers Association.

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We guarantee every subscriber against loss thru dishonesty or attempted swindle by any advertiser in this publication. We do not attempt, however, to adjust trifling differences between the subscribers and honest responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within thirty days from date of the transaction, and the subscriber must have mentioned Utah Farmer when writing the advertiser.

The article and cuts in last weeks issue on "Hotbed Construction" was by C. B. Sprague of the Washington Experiment Station at Pullman.

Did you get some of our roses? They will brighten many a dull spot and make the home surroundings much more attractive. It's just the right time to order them now.

Buy the advertised article. The advertising is a guarantee of the makers' confidence in his own output. Above all don't take anything that is "just as good." This is the pirate's way of preying upon legitimate business.

#### AT RICHMOND.

It was a big boast for better cows—the Black and White day at Richmond.

Just such gatherings and days will help the dairy business of the state. Why don't other places follow Richmonds lead? There were 227 head of Holsteins on the show grounds, including calves, cows and bulls. No auction was held but a number of private sales were made. One cow shown on the grounds has a monthly check of \$29.00 for the milk she produces. Many people attend the gathering and those in charge are to be congratulated for the success attained.

#### CLEAN THE SEED.

Every farmer should now be getting his seed cleaned and prepared for planting. If this work is left till the day before the seed is to go into the ground a poor job is likely to result. Grain should be run through the fanning mill to remove weed seed and foreign matter as well as shrunken kernels. Wheat and oats should be treated with formalin to kill smut. Germination tests

should be made of the corn to see if the germs are alive and vigorous; and potatoes should be selected for freedom from disease and also treated with corrosive sublimate to insure against certain forms of disease. All these things take time if they are to be well done, and they should not be left till it is too late to do the work right.

#### AS YE SOW

"As ye sow, so shall ye reap" is a saying that has many times been demonstrated to be true. It is evident, therefore, that the harvest—the reward of the farmer's year of toil—is determined largely by the thoroughness with which he does his spring work. Carelessness at this time of year makes itself felt more than at any other time, and if the farmer is going to neglect his crops at any time during the year, certainly the season of seeding is not the time for that neglect. Seeds that are cast carelessly on unprepared soil cannot make a good crop even if a great deal of hard work is done later. A good motto for the farmer to adopt is: "Start right in the spring, and then keep right the rest of the year."

#### GET THE MANURE OUT

The greatest good is obtained from manure if it is spread out on the land just as soon as possible after being made. When improperly piled, there is likely to be a great loss especially in the spring of the year after the pile begins to dry out and heat. If manure must be kept in piles, these piles should be kept moist and compact and not allowed to heat, for in heating the most valuable part is lost. When manure is hauled to the land, it should be spread out at once and not allowed to remain in small piles scattered over the field since in these small piles undesirable heating will result. The large piles of manure that have been accumulating on many farms during the winter should be hauled to the land as soon as possible.

#### THE UTAH FRUIT GROWERS' ASSOCIATION

In another column will be found the account of the annual meeting of the above Association. While the past year was one of discouragement to the fruit grower on account of overproduction in the peach districts of the East and the lack of facilities for exporting apples, still the Association has done remarkably well under the circumstances. Starting three years ago without experience of any kind, this Association has been able to obtain in the first two years as high an average price for the Utah fruits as any other western association. The returns for the western associations for 1915 are not all in as yet, but the report of this year's business indicates that the Utah Association equalled or exceeded those associations who have so far published their results, and it may be taken for granted that the associations that made the best sales will be the first to publish.

The new Executive Committee and Officers elected are all well known people of Utah and have already demonstrated their ability to handle the Utah crop, as well as any other marketing organization in the country. Under these circumstances they should have the support of the fruit growers and the cooperation of other marketing agencies, so that many of the unpleasant methods of the past should be eliminated and everyone should receive more for their fruit in the future.

#### DR. WIDTSOE'S WEEKLY MESSAGE.

##### THE HOLY EARTH

Dr. Liberty H. Bailey, America's foremost writer in behalf of the farmer, has written a book called The Holy Earth, which is published by Charles Scribner's Sons and may be secured from any bookseller.

If every Utah farmer would read this book, a nobler soul would give life to our rural activities, for in the Holy Earth Dr. Bailey has sought out the meaning of the farmer's work and pointed out the farmer's place in the scheme of earthly things. Man is of the earth; and out of the earth is drawn, at least, all that man considers of worth. Dr. Bailey speaks of a good, kindly and holy earth, out of which must be drawn the new order of things for which we are all hoping, and he assures us that "a society that is founded on an immoral partition and use of the earth cannot itself be righteous and whole."

Out of this view come great consequences which occupy the major portion of the book and in which appear and reappear the thoughts that the earth is for all and may be made to serve the needs of all; that it must be kept without loss to those who come after; that the simple eternal principles of life must govern the man that tills the soil, and that, in the earth, particularly as the farmer knows it, are appeals to every noble sense of man.

Note some of the subjects considered: The brotherhood relation; the farmer's relation; the underlying training of a people; the neighbors' access to the earth; the subdividing of the land; a new map; the honest day's work; the spiritual contact with nature; the struggle for existence; war; the daily fare; the admiration of good materials; the keeping of the beautiful earth; the forest; the open fields; the ancestral sea, and so on.

Written in beauty, the book is really a serious expression by a great, wise thinker of the problems of the day as they relate themselves to the "keeping and dressing" of the earth. The farmer who reads it will be benefitted and made to enter his work with new joy, and every citizen will be refreshed by the reading of this book, and will be brought nearer to the eternal realities of the earth, and thereby be given new strength for the work that life may place upon him.

The Holy Earth is as a great map of earthly relations; it is well that its majestic thoughts have been made available to all.

#### BINDING TWINE SITUATION.

There seems to be a very strong monopoly which has hold of all the sisal used for the manufacture of our binding twine. Those in control have already advanced the price from 2½ to three cents a pound, and this means that the American Farmer will have to pay to this trust or monopoly a profit of three to five million dollars this year. It means that our readers will share in this amount to the extent of about seventy-five thousand dollars.

Write your congressmen and senators and see if something cannot be done to overcome this increased burden that is being placed upon the farmer.



### FEEDING THE DAIRY CALF.

(Continued from page 3)

straw, or timothy hay, as roughage, all of which are low in protein, will respond much more readily to a ration in which there is some high protein fed, as for example linseed or cottonseed meal. What the feeder must do is to avoid a combination of feeds all high in the same element. Such rations seldom give good results. Even whole milk of an abnormal high fat content is a source of much trouble in feeding calves. Under natural conditions, cows produce milk of about three per cent fat, but because of the stress put on milk of a high fat content, they have been bred to a point where individuals will give milk testing five per cent. The demand of a calf, however, is still for a milk of three per cent, and probably this is the reason that milk very high in fat does not give good results in feeding calves.

Among other facts, it is well to remember that the digestive tract of the calf is comparatively small and that frequent feedings of small amounts during the first month is almost imperative. Not over ten to twelve pounds of milk per day should be fed to a calf under six weeks of age. The amount of milk may be increased gradually, until, at the age of three months, twenty pounds may be fed as a minimum allowance. Calves under one month of age should be fed three times a day.

During the first month, it is advisable to grind the grains fed in connection with milk. At the end of this period, however, either oats or corn

may be fed unground. Hard grains like kafir and milo will give best results when ground. All concentrates should be fed dry in a trough provided for the purpose. The practice of mixing feeds with milk is not to be recommended. Doubtless, dry feeding is preferred from the fact that calves chew and masticate their feed much better than when they gulp it down with the milk.

### THE BOARDER COW'S SUCCESSOR

Old Bossy in the barnyard is giving down here milk, and the cream there'll be upon it will be rich and fine as silk, for Old Bossy is a wonder in her own lacteal way, and she's on the job her way.

But her blooming predecessor was a lean and boarder cow; she might have meant a profit, but she didn't quite know how. She'd a gentle disposition, was affectionate and kind, but the figures in the ledger showed she always was behind. She couldn't fill the bucket when we milked her, night and morn, and the color of the product held no hint of golden corn, but instead of the traditional, the customary hue, it was just a plain and unadorned and dark and dismal blue.

The ties of love are strong, you know, and stand a lot of strain, the thoughts of parting from that cow would always give us pain; we tried encouragement and feed, and changed her ration oft; we tried awhile some dry, hard food, and then we tried some soft; we put her in the meadow in the hope that a change of scene would improve the sort of milk she gave, when tested by machine. We played soft tunes at milking time, to soothe

her shattered nerve, but she still gave medicore milk, we couldn't make her swerve.

And so we parted from that cow, despite affection's hold; the butcher may discover that she has a heart of gold but in the job of making milk she was a failure quite, she never seemed to get along nor find the method right.

We've learned this little lesson—it applies to men and brutes—don't rely on good intention, you should know them by their fruits; and the little Babcock tester, while it seems a simple toy, is the signboard to cream profits, and with profits there comes joy. So Old Bossy in the barnyard, giving down that golden stream, got her job because the tester showed that she was strong on cream.

### HELPFUL HINTS

(By the Sheep Sense Editor.)

An Efficient Vermifuge.—Mix equal parts of nitro-glycerin and gunpowder in a quart of gasoline and sprinkle over the feed morning and night. On the third day feed a little mixed flint and steel, pea size. In the process of digestion, the pieces of steel will rub against the flint, causing a spark. Results are sure; in fact, we can positively guarantee that if you use this method all worms will be destroyed.

A good method of keeping a record of the ages of your breeding ewes is to make a plaster cast of the mouth of each ewe, which should be plainly labeled with the number of the ear tag, and kept on file for record. This is particularly valuable in large bands of a thousand or more, where it is very difficult to remember all

the ages. Note: If you sell the ewes it might be well to destroy the record before it falls into the hands of the new owner in order to avoid hard feelings.

A correspondent who has had great success in producing pickled lambs' tongues and mutton stew administers a quart of whiskey in the drinking water daily. However, lambs handled in this manner are usually rather unsteady on the market.—Knallen's Sheep News.

### WORK

Let me but do my work from day to day,  
In field or forest, at the desk or loom,  
In roaring market-place or tranquil room;

Let me but find it in my heart to say,  
When vagrant wishes beckon me astray,

"This is my work—my blessing, not my doom;

"Of all who live. I am the one by whom

"This work can best be done in the right way."

Then shall I see it not too great, nor small,

To suit my spirit and to prove my powers;

Then shall I cheerfully greet the laboring hours,

And cheerful turn when the long shadows fall

At eventide, to play and love and rest,  
Because I know for me my work is best.—Henry Van Dyke.

Send in your order for Butter Wrappers today.

SALT LAKE  
**THEATRE**

**SPECIAL CONFERENCE STARTING  
RETURN WEEK WEDNESDAY**

**APR. 5**

**MATINEES**  
2:15

Elliott and Sherman Presents

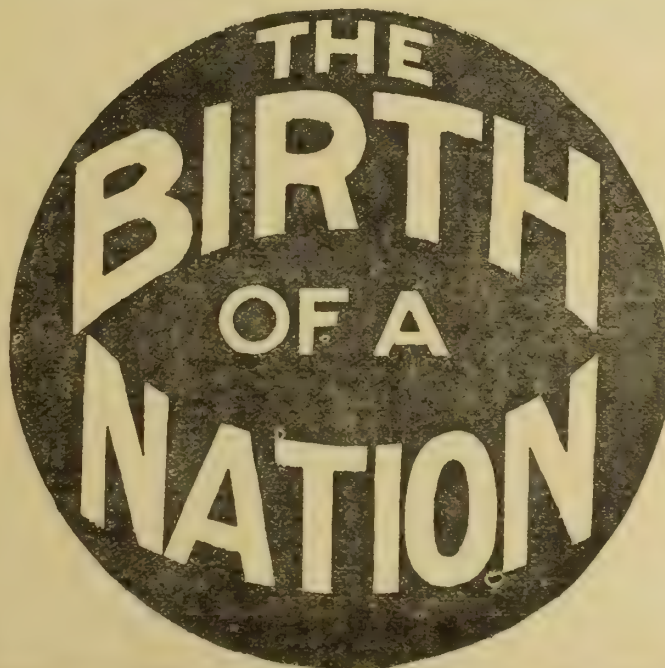
**D. W. GRIFFITH'S**

**EVENINGS**  
8:15

**WORLD'S MIGHTIEST DRAMATIC SENSATION**

**LIFE'S OPPORTUNITY  
FOR CONFERENCE VISITORS  
TO SEE THIS WONDERFUL PRODUCTION.**

**Symphony  
Orchestra  
of Thirty**



### PRICES

Evening 50c, 75c, \$1.00, \$1.50  
and \$2.00

Matinees 25c, 50c, 75c and \$1.00

**Notice to Conference Visitors.**  
The Birth of A Nation will positively not play any other towns in Utah out side of Salt Lake, Ogden and Provo. Make your reservations now. All mail orders accompanied by check will be promptly filled. Don't wait and be disappointed.



## The Charlatan and His Testimonial

Third Article by the State Dairy and Food Department and State Board of Health.

"The operation was successful but the patient died."

You have all heard that old one, of course, many times. Now we wish to paraphrase the jest and say—as the patent "med'cine" fakery might say:—"Our remedy 'benefitted' him but he died."

These selfsame "patent medicine" dispensers, if they told the truth (that is an assumption, not a joke) would likely also add: "The remedy benefitted us—to the extent of \$50; or to whatever amount they may have bled a dying man of while he hoped for life.

The next time you read a testimonial for a cure-all first go out and purchase a large package of condensed Great Salt Lake. One grain of salt is not enough to take with most of such testimonials. You will require a whole nickel's worth.

Read them carefully. In most of the testimonials you will note that the writers state they were benefitted by the "cure" or "remedy" after taking but three or four doses. That seems to indicate a speedy recovery. For the sake of argument let us assume that the testimonials are genuine (which all are not, by any means). Now let us investigate and determine if benefits after three or four doses does not mean a speedy recovery what else it might mean.

The State of Utah is in possession of analysis made of most of the bogus remedies now on the market. In nearly all of them can be found a large percentage of alcohol—as much as 44 per cent in some—or some narcotic such as opium or morphine.

Everyone knows either by experience or by observation what are the effects of alcohol or narcotics. They

are stimulants—false stimulants, for they stimulate only temporarily. They give a fake hope and a senseless bravery. The intoxicated man, however small, wants to attack large policemen; the "hop head" will face bullets as if they were nothing but snowballs. That reminds us of the yarn about the mouse.

It seems some whisky had been spilled on the floor and a small mouse crept out of his hole and lapped it all up. When he got through he looked around.

"Now where is that cat that has been looking for me," he said.

Most diseased persons who write testimonials for bogus medicines are just like that mouse. By taking some of the "medicines" they have been given false courage. They gaily write testimonials that they are "benefitted" or "cured" just as the mouse wanted to meet the cat. All the mouse's courage would not have saved him from death if the cat had appeared. All the false hopes raised in a sufferer's mind by stimulants cannot save his or her life.

The worst feature of such alleged cures is that they will not cure a real disease and where only an imaginative one exists they often create a real one of some sort. Also, alcohol and narcotics are positively injurious in most chronic maladies.

Then there is another type of person who writes testimonials. There may be no stimulants in the medicine this sort of person is taking. It may be merely salt and water. It is advertised in large letters as a "cure" for consumption. Some poor consumptive buys it. He takes it.

"I am getting better," he tells himself and, because he wants to believe it he does believe it temporarily. That is where the cure shark gets in his fine Italian hand. Within a week after the remedy is sold comes a letter asking if there are benefits.

"I have only taken three doses and I feel like a new man. My cough is easier and I sleep better," writes the victim, and perhaps you think there isn't enthusiasm in the medical factory when his letter arrives.

The "doctor" and his assistants are joyous. Not because they think they are curing a man. They know they are not. But it means more dollars. It is another "genuine" testimonial. It is put into type at once—newspapers, magazines, booklets; every possible publication soon carries the news that the nostrum is "benefitting" this man.

Some other poor sufferer on the grave's rim reads that testimonial. By the time he reads it, the testifier may be dead. But that doesn't matter. What testimonial readers don't know doesn't hurt them, reason the quacks. As for the latter, it is safer to use dead men's testimonials than live ones' anyway. A live man can deny he was cured or sue for falsely using his name. Dead men write no denials; they enter no suits.

Just now in Utah we are reading much—in paid advertisements—about the Chamleys of Los Angeles. "Dr." and Mrs. Chamley live in Los Angeles because they think the climate is good for their health. It wasn't very healthy for them in St. Louis and Chicago where they formerly carried on the sure-thing game. In fact they



Every Pound Guaranteed.

### HEWLETT'S LUNETTA BAKING POWDER

For strength  
For Purity  
For Quality  
For Price  
25c the Pound Tin



SIDE VIEW 6-DISC

### Howe Weeder

We make several sizes but recommend the 6-disc size, cuts 42" wide with 4 ordinary horses \$140.00

7-disc size, cuts 49" wide with 4 large horses \$150.00

8-disc size, cuts 56" wide with 5 large horses \$160.00

F. O. B Salt Lake City, Utah. The 7 Disc Size will successfully weed and summer fallow 1 acre per hour. Order early as we cannot promise prompt delivery on late orders.

Best of reference.  
**DAVIS, HOWE & CO.**  
Salt Lake City, Utah.

DAVIS HOWE & COMPANY, September 27th, 1915.  
Salt Lake City, Utah

GENTLEMEN:—After using your Howe Weeder and Summer Fallow machine sixty days, we are pleased to say it has saved us at least \$150.00 already in our weeding work. It does double the work we were doing before with one man and five horses, and does it better. It is by far the most successful machine for cutting out weeds and doing summer fallow work we have ever used, and we take great pleasure in recommending this machine to dry farmers as the best tool for this work we have ever seen.

Very truly yours,  
J. W. GRACE,  
Mgr. Fort Harriman Land and Live Stock Co.  
R. F. D. No. 1. Riverton, Utah

were run out of both cities.

The "doctor" and his wife say they can cure cancer and offer a guarantee of \$1000. They have the "most wonderful discovery of the day." They get this wondrous dope from the Sandwich Islands. Just why they should go to the Sandwich Islands to get water, alcohol, saccharin, opium, glycerine, bees wax and a few other common things that could be purchased in Salt Lake City or Los Angeles none can tell. The U. S. Department of Agriculture gives us the following analysis of the Chamley cancer "cured":

Remedy No. 1—Cancer Specific: 99 per cent water and alcohol; minute quantities of iron and strychnine sweetened with saccharin, (a substitute for sugar).

No. 2—Alcohol 22 per cent, 22 per cent water, some tannin, carbolic acid, opium and a big percentage of glycerine.

No. 3.—Bees wax, resin and fat.

Aside from the fact that it has been proved Chamley is a sham; that he has changed his name to avoid prosecution (formerly calling himself Chamlee), aside from the fact that his dopes cannot possibly cure cancer, he and his tonics are all right.

Chamley is fond of testimonials so we wish to quote you one received by the State Food Department from Mrs. A. L. George, 1058 Jefferson street, Salt Lake City:

"Relative to the practice of one Dr.

Chamley of Los Angeles, California, beg to say that our experience with this man has convinced us that he is an absolute fake and the \$1000 guarantee he gives is worthless.

"Any further information we can give we will be glad to do so.

"Respectfully yours, Mrs. A. L. George."

There is a statement to think on before you waste any money on the shams of Chamley.

We now wish to call your attention to "Lung Germine," on the market in the West at present. It is a "treatment for consumption." It is well known that alcohol is one of the worst things a tubercular patient could take. Yet laboratory examination shows its ingredients as follows:

Alcohol (absolute) 44 per cent.  
Sulphuric acid (H<sub>2</sub>SO<sub>4</sub>) 4 per cent.  
Water 52 per cent.

Yet, in spite of the fact that Lung Germine is not only not beneficial—that it is positively injurious in tubercular cases, the company that sells it gets and publishes testimonials. Many of those come from those who are dying, some from those who merely imagine they have lung trouble, other, likely, are faked.

Testimonials for fake "patent medicines" are like the bogus nostrums themselves—they look good in print and raise false hopes, but are as worthless as the grafters who exploit them.

**Before  
You Start  
Plowing**



Equip yourself with a dependable lubricant, so that the loads of your plow and disc may be relieved as much as possible. If you use horses, you'll lighten their loads and keep them fresher by using

### Golden Harvester Machine Oil

on all your implements.

If you use an engine, you'll save power and get over the ground more quickly with perfect lubrication this oil gives.

It's the all 'round farm lubricant. It puts new life into your plows, discs, mowers, rakes, binders, threshers etc. Get a can today from your dealer.

**Utah Oil Refining Co.**  
Refiners  
Salt Lake City, Utah.



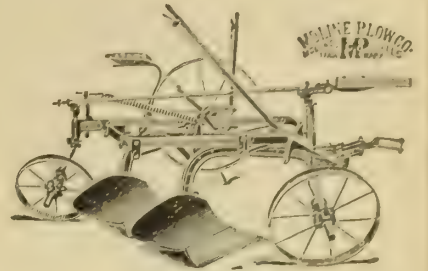


STYLE 379  
HENNEY

HENNEY  
BUGGIES  
AND  
FLYING  
DUTCHMAN  
VEHICLES  
"THE QUALITY  
LINE"  
BUILT  
IN FREEPORT



MOLINE  
PLOWS  
MONITOR  
DRILLS  
SCHUTTLE  
AND MANDT  
WAGONS  
DEERING  
HARVESTING  
MACHINERY

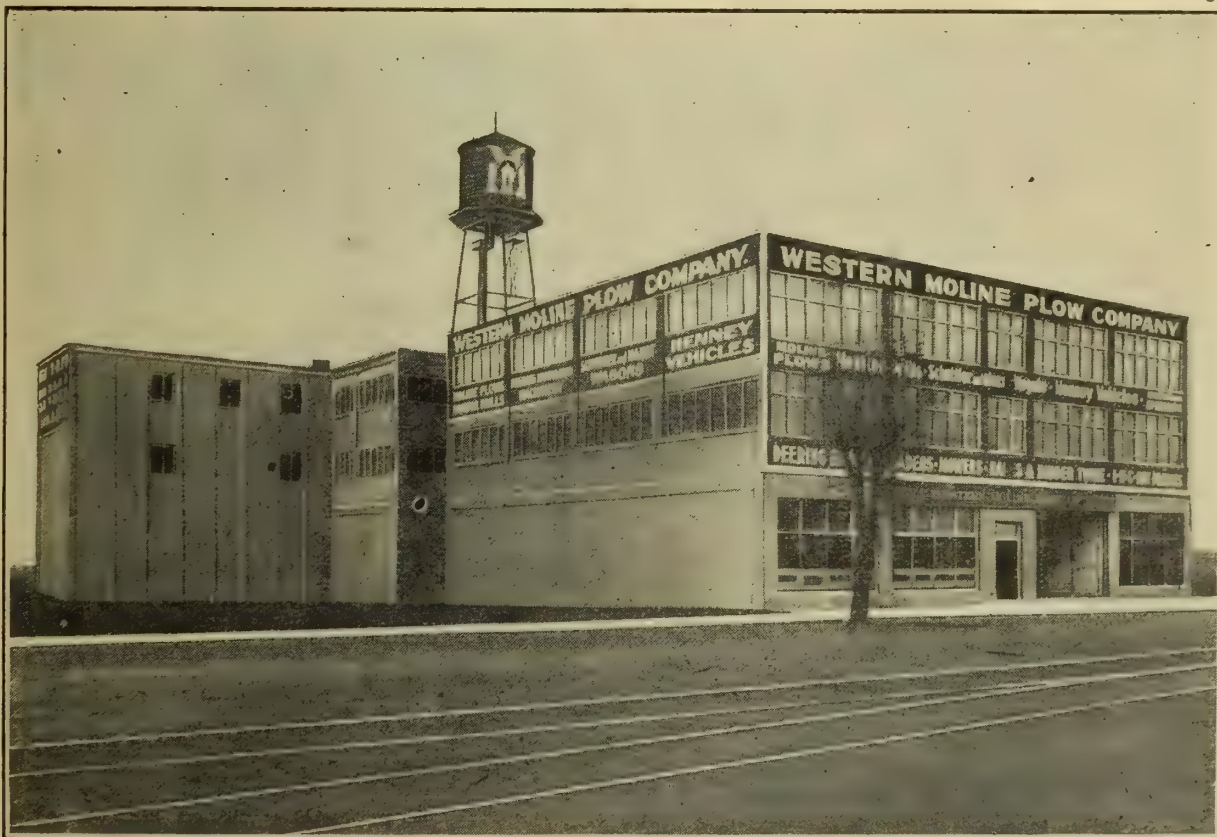


BEST EVER  
GANG OR SULKY

MOLINE

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DEERING

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"WELCOME CONFERENCE VISITORS"

We keep open house April 5th to 8th, and extend to you a cordial invitation to call at the "HOME OF THE MOLINE LINE."

It will be a pleasure to show you our full line of — MOLINE FARM TOOLS, MONITOR DRILLS, SCHUTTLE AND MANDT WAGONS, DEERING HARVESTING MACHINERY, ETC.

STYLE 260

COMMERCIAL BODIES  
FOR FORD CARS

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MANUFACTURED BY  
HENNEY BUGGY COMPANY

STYLE 220

STYLE 200



**Western Moline Plow Co.**

Salt Lake City, Utah.

150-160 So. 4th West Street.





## Utah Fruit Growers Association

The annual meeting of the Utah Fruit Growers' Association, which was held in the Capitol building, Salt Lake City, March 7th, was the best attended meeting that the Association has ever had. Considerable more than the majority of the fruit growers were represented in person or by proxy.

In the absence of General Manager Garvin, who was detained in Texas by sickness, Secretary Homer made a report of the business of last year. The financial statement showed that despite the small crop handled and the poor marketing conditions of the fall, that the Association was in very good financial condition; that every dollar of its stock was represented in real estate, buildings or supplies for next year's crop.

Between two and three hundred carloads of fruit were shipped during the season, of which the following points contributed the larger amounts:

	Cherries	and Misc.	Peaches	Apples
Ogden	1		64	—
Clearfield	6		30	10
Bountiful	—		10	—
Brigham	—		17	—
Tremonton	—		18	32
Provo	1		—	4
Logan	—		—	23

Provo is included in this list only to show the difference between this year and last, Provo being one of the largest shippers of last year, in fact contributed nearly one-third of the entire Utah output, while this season the frost took practically the entire crop.

The fruit market for the season of 1915 was very weak, especially for peaches, the larger centers having been receiving peaches continuously for two months before the Utah crop came on. The apple market opened up with fair prospects, but on account of lack of shipping facilities for the exported trade, a large amount of fruit that ordinarily goes abroad was dumped onto the local market and the price fell constantly throughout the season.

In spite of these disturbing influences the Utah Association obtained as good prices for the products it shipped as any other association that has so far published its 1915 results, and even better than some of the Northwestern Associations. The average prices received for the 1915 crop were as follows:

	Extra	Fancy	C. Grade
Jonathan	1.04	.91	.71
King David	1.22	.93	.70
Staymen	1.00	.85	.67

Winesap	1.15	.95	.77
Rome	1.00	.83	.70
Gano	.80	.66	—
Ben Davis	.70	.61	—
Missouri Pippin	.96	.75	.70
Arkansas Black	1.32	1.05	.90
Delaware Red	1.10	.95	—
Black Twig	1.14	.90	.70

No C. Grade of Gano or Ben Davis were packed.

The Association then proceeded to election of directors. The following were re-elected: George Romney, Jr., Smithfield; H. H. Thompson, Roy; J. B. Walton, Provo; Dr. A. G. Stoddard, Spanish Fork; J. Fred Odell, Woodcross; J. E. Wright, Ogden. The new directors elected were as follows: Myron C. Newel, Provo; F. W. Studebaker, Elberta; H. C. Blood, Clearfield and Dr. E. D. Ball, Logan.

These with the following hold-over directors constitute the Board of Directors for 1916: Hugh J. Cannon, Salt Lake City, J. P. Holmgren, Bear River City; John Dixon, Provo and F. S. Hansing, Clearfield.

The Board of Directors then met and elected the following officers:

Hugh J. Cannon, Salt Lake City	1st Vice President
John Dixon, Provo	2nd Vice President
J. E. Wright, Ogden	President
W. H. Homer, Jr.	Treasurer and General Manager
P. J. McGregor	Secretary and Traffic Manager

While not elected to that position, it is expected that Mr. Garvin will handle the fruit under the title of Sales Manager.

They next elected the following Executive Committee: H. J. Cannon, John Dixon, J. E. Wright, John Holmgren and George Romney, Jr.

This committee will have active charge of the affairs of the Association for the year. The outlook for the Fruit Growers' Association under this management should be of the most promising. The Directors are well distributed throughout the State and are some of the strongest and most representative fruit growers of their districts, and should be in close touch with the growers and be able to represent their wishes. The Executive Committee is made up of exceptionally strong men well distributed throughout the State and known to be men of ability who are used to handling large affairs. In their hands the Association should grow and prosper. The rearrangement of the work of the office force brings it more nearly in line with similar organizations throughout the country and should give increased efficiency in the handling of the business.

### FOR THE ADVERTISER.

The man who stops his little ad, is not so very wise, bedad!

Because his advertisements tell The public what he has to sell. And if his ad is not on deck, The people pass him up, by heck! And none of them will hesitate To trade with merchants up to date.

To stop your ad, we should remark, is just like winking in the dark—

You may know what it means, but gee!

Nobody else can ever see. So do not for a moment think That when you cut out printer's ink, You're saving money on the side; 'Tis merely business suicide.

—Chicago Printer.

## Interlocking CEMENT STAVE Silos



### ANDERSON FARM

Lehi, Utah

12x35 foot silo, 100 ton capacity. A. B.

Anderson, writes that his silo is a complete success.

Information about concrete on the farm, including details as to Silo building, will be furnished free. Just sign coupon below and mail it to us.

Intermountain Concrete Co.

OGDEN-UTAH

Please Send Me Catalogue No 3

NAME \_\_\_\_\_  
ADDRESS \_\_\_\_\_

## SEED CORN

### For Ensilage

As **GOOD SEED** Corn is scarce there won't be enough to go round. **P-W's Leaming and Pride of the North** produced immense crops of Ensilage last year. You can scarcely plant a more profitable crop.

Better secure your seed **NOW**.

If our Seed and Nursery Book hasn't reached you, a postal will bring you one by return mail.

**PORTER-WALTON CO.**  
Seedmen and Nursery Specialists  
SALT LAKE



### CALKO DIP

An insecticide and disinfectant for

Cattle, Sheep, Hogs, Horses and Poultry  
40c qt., 75c half gal., \$1.25 gal., delivered.

### CALKO

Stock Conditioner  
Keeps stock healthy and thriving.

CALKO HEALING POWDER heals saddle and collar galls, bark wire cuts, etc. Keeps flies flying.  
Send in your order.

**CALLISTER-NORTH CO.**

McIntyre Bldg., Salt Lake City, Utah



# THE FARMERS' MARKET PLACE

For the Buyer

This market place offers our subscribers and readers a very good place to advertise. If you have something to sell or want to buy here is the place to tell it. These advertisements are read because they offer bargains, your bargain should be here. Take advantage of this opportunity today.

For the Seller

## Gem Herd of Improved Chester White Swine.

This Herd Bred, Raised and Sold. Both Boar and Sow Grand Champions of the World's Fair held at Frisco this last year. Both Sire and Dam, is still in the herd. If such breeding interests you, write for illustrated catalogue. Stock of all ages for sale at all times.

Address

**GEO. H. LAWSHE**

Falls City

Idaho

### FOR SALE

Foundation Stock in Holstein Fresian's and Duroc Jerseys. Will exchange a few for hay or grain. For breeding and particulars write  
**JOHN W. STUBBS**  
R. D. No. 2. Provo, Utah.

## Percheron Stallion

An unusual opportunity to purchase a good stallion. Foaled June 1913. Utah bred. Sire imported Damocles. Very large and finely developed. Direct all inquiries to B. T., Utah Farmer, Lehi, Utah.

## CHERRY CREEK DAIRY FARM OFFERS YOUNG BULLS FOR SALE

Herd Sires: Rag Apple Korn-dyke 13th, Grand Champion Utah State Fair 1915. Sire Ray Apple Korndyke. Dam Fairview Mabel Korndyke. A. R. O. record as a Jr. 3 year old 25.51, Bt 4.83 fat. Rag Apple Valerie. Sire Rag Apple Korndyke 13th, Dam, Princess Valerie. A. R. O. record 23.00 Bt from A. R. O. Dams.

**NELSON BROS. Props.**  
Richmond Utah

## BUTTER WRAPPERS

We carry a large stock of the Best Vegetable Parchment Butter Wrappers and Especially Prepared Ink for Printing the same. We furnish them Postage Prepaid at the following Prices money to accompany order.

100	\$ .90
200	\$ 1.25
500	\$ 2.00
1000	\$ 2.75

Send all orders to

**THE UTAH FARMER**  
LEHI, UTAH

### IF YOU WANT A BARGAIN "SEE ME."

160 acres improved ranch in Idaho, half under cultivation water right, a big snap at \$2250, half cash.

640 acres good land in Rich county, water right, 60 acres in hay, fine for hay, grain and ideal stock proposition. Take it for less than half what it is worth, \$15 per acre. Easy terms, or might take city property.

4400-acre cattle and stock ranch in Montana, good land, fine range, \$25 per acre, terms.

840 acre, extra good stock ranch, independent water right, large free range, all kinds implements, 5000 bu. oats, lot of cattle, horses and hogs go with place, only \$35,000, terms, or might take city property at cash value.

**GEO. W. DANLEY**

Was. 2989. 707 Walker Bank Bldg.  
SALT LAKE CITY

## Money to Loan

On improved farms with primary water rights, at reasonable rates."

### INTER-MOUNTAIN LIFE INSURANCE CO.

11th Floor Boston, Bldg.  
Salt Lake City, Utah.

## Alfalfa Seed

16c lb. in lots of 100 lbs. or more. 16 1-2c in less quantities. Terms cash.

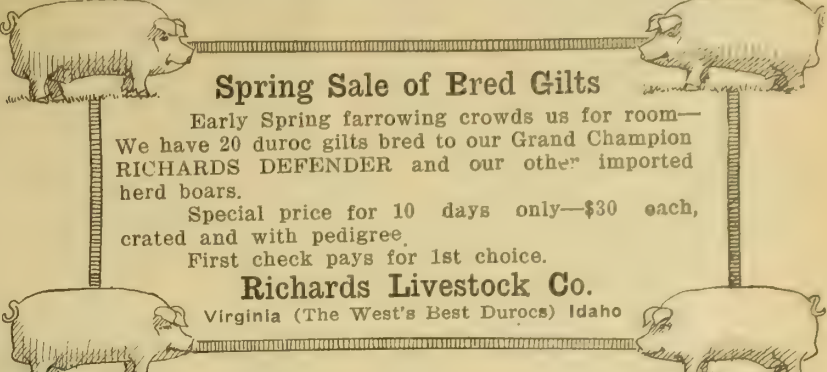
## Alfalfa Chaff Alfalfa Hay

**A. A. HINCKLEY,**  
Hinckley, Millard Co., Utah

### EGG MACHINES.

Our Leghorns are truly worthy of the name. Hardy Laying Paying Strains. We are offering the biggest chick bargain of the season—try us and be convinced. Ask for circular.  
**MANTI MAMMOTH HATCHERY CO.**  
Manti, Utah.

Mention Utah Farmer when you write.



### Spring Sale of Bred Gilts

Early Spring farrowing crowds us for room—We have 20 duroc gilts bred to our Grand Champion **RICHARDS DEFENDER** and our other imported herd boars.

Special price for 10 days only—\$30 each, crated and with pedigree.

First check pays for 1st choice.

**Richards Livestock Co.**  
Virginia (The West's Best Durocs) Idaho

**BABY CHICKS & HATCHING EGGS**  
White Leghorns, Brown Leghorns, Barred Rocks, R. I. Reds, Black Minorcas, Anconas, Buff and White Orphingtons. Prices on application.

**THE ORLAND HATCHERY**  
Orland, Glenn Co. California

**4—BEST LAYING STRAINS—4**  
Rose Comb Rhode Island Reds and White Wyandottes, Single Comb Black Minorcas and White Leghorns. Egg fertility and stock guaranteed. Write your wants.  
E. C. Blanpied, Box 60, Milford Utah.

### DAY OLD CHICKS

From our own White Leghorns and R. I. Reds, selected as layers from stock "bred to lay" for 4 generations. Also eggs for hatching. Book orders now.  
**Bates and Sons, Provo—R. F. D. 1—Box 310.** Breeders of Airdale Dogs—puppies for sale now. Write us.

### BABY CHICKS

Single Comb White Leghorns. The kind that pay for five or six years. Especially bred for long profitable service. Send for booklet. Early orders insure your wants.

**MOUND VIEW FARM**  
R. D. No. 2 Brigham, Utah

### WHAT ARE YOU GOING TO DO WITH THOSE WASTE ACRES?

Lands from which you receive nothing, lands that are really a burden to you, lands that do not return a profit sufficient to pay the taxes. That alkali land, that land that is too wet.

### WHAT ARE YOU GOING TO DO WITH SUCH LAND?

Plant it to Sweet Clover and let your waste lands be redeemed in Nature's own way. Forget the idea that Sweet Clover is a weed. It is a plant worthy your careful study and consideration. Your waste land planted to Sweet Clover will return you a profit, it will produce you an abundance of good feed, if properly handled. It will make good land out of those acres that now return you nothing.

### IF YOU HAVE ALKALI LANDS PLANT SWEET CLOVER.

IF YOU HAVE WATER LOGGED LAND, DRAIN IT AND PLANT SWEET CLOVER. THE REDEMPTION IS SURE.

We have had considerable experience in the production of Sweet Clover on waste land and will be pleased to answer any inquiries.

At present we can furnish to the farmers of this section an "A" grade, re-cleaned Sweet Clover seed at a price which we believe will be a decided saving to them. We can also furnish unhulled seed and screening at attractive prices.

**L. N. HINCKLEY**

Provo

Utah

**HOUSE AND BARN PLAN BOOK FREE**—Gives direct from-mill prices on many designs. Send us your carpenter's bill for quick estimate. Western Lumber and Millwork Company, Tacoma, Washington.

### WE MAKE

Farm and Ranch Loans  
in Utah, Idaho,  
Wyoming, Oregon and  
Colorado.

### MILLER & VIELE

803-7 Kearns Bldg.  
Salt Lake City.

WHILE IN SALT LAKE  
GO TO THE  
**WILKES** THEATRE  
ON STATE ST.  
ERNEST WILKES STOCK CO.

Highest Class Royalty Plays

NEW BILL EVERY SUNDAY

Matinees Thursday and Saturday

Evenings 15-25-35-50c  
Matinees 15-25c

## BOWE'S HOG OILER

New Idea Only Oiler made without valves, cylinders or wheels. Can't clog, stick, leak or get out of order. Guaranteed to work. Use crude or Medicated oil. Kills Lice, keeps pens and yards disinfected. One Oiler cares for 10 to 50 hogs. \$1.50 delivered.

## CALCO HOG POWDERS

Is a Hog conditioner and Worm expeller. 15 lbs., \$1.50.

**HEALTHY HOGS MORE PROFITS**  
Catalog Sent Free.

**CALLISTER-NORTH CO.**  
McIntyre Bldg. Salt Lake City, Utah

Mention Utah Farmer when you write.





CONCRETE SEWER AND IRRIGATION PIPE.  
They Grow Harder and Stronger With Age. All Other Pipes Decline.  
ABSOLUTELY ALKALI PROOF  
UTAH CONCRETE PIPE COMPANY  
Salt Lake City, Utah.

**MODERN MACHINERY**  
**LANDES & CO.**  
*Phone Was. 830*  
2nd. West & So. Temp.  
Salt Lake City, Utah.

AVERY TRACTORS  
NOVO GASOLINE ENGINES  
AUSTIN WESTERN ROAD  
MACHINERY  
PUMPING PLANTS

FOR  
SALE  
BY  
ALL  
DEAL-  
ERS.



GENERAL OFFICES OGDEN, UTAH

GARMENT WEARERS,  
ATTENTION!

**Temple Brand**  
GARMENTS

The above label is found in the neck of all approved Temple Brand Garments. Be sure it is in the garment you buy.



If WE Insist Today

**Capells**  
**Sanitary**  
**Salt**

YOU'LL Insist Tomorrow

**Mail Your**  
**Laundry**

to us by

**Parcel Post**

—regular city prices for out of town customers.

One trial will convince you.

**Royal Laundry**

SALT LAKE CITY

Something for the Home



**CORONA TYPEWRITERS**

weight 6 pounds

Agents, A. B. Dick Mimeographs  
Addressing machines and all makes of typewriters.

**UTAH TYPEWRITER  
EXCHANGE CO.**

36 W. 2nd., South.

The United States Government is helping very materially in protecting Trade Marks. In doing so they are helping the honest manufacturer, as well as the public, to avoid goods that do not give satisfaction. The control of individual trade marks compels manufacturers to maintain a certain standard or go out of business.

Goods of a certain standard can always be identified by a trade mark, and the public can avoid them in the same way if they do not give satisfaction. This induces manufacturers of similiar trade marked goods to compete in quality and service. In this way they can increase their trade by making their trade mark stand for something.

It is generally agreed that increasing the production should reduce the cost of producing. Advertising helps to increase the sales, and in this way helps to lower the price of any product.

Overhead expenses, as the manufacturer calls



We are the people who make

**VITRIFIED  
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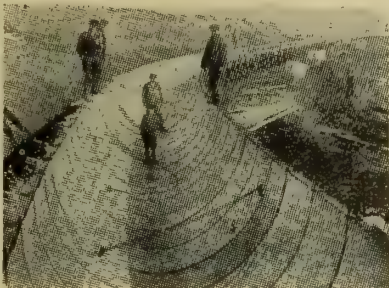


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them, when they can be divided among a great number of customers reduces the given amount on each article, as compared to the same amount having to be borne by a few purchasers.

Advertising increases the volume of sales and thereby helps the manufacturer to sell a better article at the same price, or lower the selling price of his goods.

A manufacturer was recently offered an enormous sum for his trade mark. The prospective purchaser suggesting that he did not want the factory or any of the material, just the trade mark, or firm name. This same man realized that the same quality of goods sold under an unknown name would be at a disadvantage, to goods of the same quality that were well known, in fact, partly sold because of the trade mark, and the manufacturer's reputation of maintaining a standard quality.

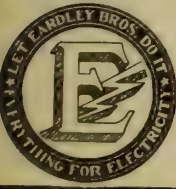
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EVERYTHING KNOWN IN MUSIC  
  
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# MODERN MACHINERY

In offering you Modern Machinery, we mean it in the fullest sense. We are continually watching the manufacturing centers of the United States for successful Modern Machinery but we do not offer it to our trade until it has been thoroughly tried out, proven satisfactory and giving others service. In this way you can depend on getting from us machinery which is thoroughly reliable and up-to-date.

Our Service means that we sell you a machine, show you how to operate it, take care of you after you purchase it, supply you with all necessary information and help. The success of our machinery in your hands means our success.

Do you see now why we want to help you?

## AVERY TRACTORS.

Successful Avery Tractor Farmers number in the thousands.

The reason for this is correct understanding of what the farmers needs are, proper design and construction.

There are six sizes of Avery Tractors which enables you to get the proper size for your own place; every size a brother to the others. The big Avery Company and the big factory back of their machines, home selling organizations which allow you to do business at home are the factors which make success.

Avery Tractors are making a success in Utah, Idaho, Nevada, and Wyoming, for others. They will do the same for you. It will pay you to investigate our tractors.

Six reasons for Avery Tractor Success are:

1. Sliding frame, two speed, double drive transmission.
2. Low Speed, heavy duty Special Tractor Motors.
3. Extra large crankshafts. No owner ever broke one.
4. Renewable inner Cylinder Walls.
5. No Pumps, fan or outside lubricators.
6. Absence of vibration.



## AUSTIN-WESTERN ROAD MACHINERY COMPANY

The first piece of improved road machinery ever made was made by the Western Wheeled Scraper Company forty years ago. In the intervening years the factories of the Austin Mfg. Company and the Western Wheeled Scraper Company have developed and built the complete lines of Austin-Western Road Machinery to the point where it is now the most widely known and at the same time the largest and most complete line of road machinery made.

Our road machinery consists of everything for road building, complete in every detail modern in design and construction and guaranteed to give satisfaction for the work it is intended.

The activities in road building is such today that everybody interested in good roads must consider machinery which will build and maintain them at the least possible cost. You cannot afford to overlook the modern equipment we have for road building.

## CONCRETE MACHINERY.

The advancement of concrete in the building and construction work of the World today makes it necessary that everyone interested in any kind of concrete must know something about Modern Machinery to handle it.

We have a complete line of concrete mixers, block machines, brick machines; mixers for silos, irrigation systems, drainage systems, dams for electric plants and, in fact, everything required in the construction of concrete products.

Little Wonder Concrete Mixers have proven successful in every section of the Intermountain District. They are used by contractors, irrigation companies, road builders and power plants. They are moderate in price and give satisfactory service. These machines will interest you.

## NOVO ENGINES AND OUTFITS.

Reliable Power is what you want. Reliable Power is the only economical or satisfactory power. The unit of power is not measured by the gallons of fuel consumed but by the hours the engine works efficiently when the power is needed.

The Novo Engines are designed for portable or stationary work, for in-door and out-door service and although they are water cooled, they cannot be damaged by freezing. No water pipes, circulating pumps are required in the Novo Engine.

Insist on the Novo; for power work it will give you service and satisfaction.

Novo Engines are guaranteed against injury to either the cylinder or the jacket from freezing and no matter how long the engine has been out of our hands, damage from this cause will be made good.

## AVERY THRESHERS

The Avery "Yellow Fellow" Threshers give you and your customer satisfaction. It is well adapted for the conditions in this Intermountain District. It will successfully thresh wheat, oats, barley, rye, flax, clover, alfalfa, peas, beans, kaffir, corn and practically every known small grain.



Avery separators are backed up by strong warranties for saving grain, for cleaning, for durability and capacity.

Avery Separators are equipped with tool steel teeth warranted for life against breakage caused by pitch forks, bolts, spades and other foreign materials accidentally entering the cylinders.

Avery Separators are equipped with the 1XL grain saving device. Avery Separators in twenty seven field tests averaged a saving of 99.9 of the grain. This is the greatest grain saving record ever made.

## AMERICAN SAW MILL MACHINERY COMPANY

This line is comprised of from the smallest to the largest sawmills and wood working machinery in the world. The line is known and recognized throughout the United States and Foreign Countries as the standard for portable mills and is the only one giving all the advantages and conveniences to be found in high priced mills.

The American Mills have no complicated parts and no mechanics and millwrights are needed to install or operate them which makes them superior to all others for portable purposes.

Building activity in the Intermountain District is such that the local lumber is in great demand. A saw mill in the mountains is a money maker for you besides being pleasant work. Our advice to you is to investigate the possibilities of a saw mill plant.

There are over 7,000 American Saw Mills in successful operation throughout the United States.

## RED JACKET PUMPS AND CYLINDERS.

Hardly a pump in the United States is better known among the agricultural trade than Red Jacket Pumps.

Red Jacket Pumps means the "so easy to fix" pump if every man who installs a pump on his place knew the advantage of owning a Red Jacket, he would without question have nothing else. With a "so easy to fix" pump he would have something which during its life could be easily and quickly repaired at a very small expense.

There are lots of users of Red Jacket Pumps in this Intermountain District. They give satisfaction. Your dealer should have them and if he does not he will install them if you insist. If he does not write us and we will give you full directions on how to get a Red Jacket Pump for your ranch.

Pure fresh water from a deep well preserves health and health is everything.

Our office and warehouse is located two blocks West of Temple Square on South Temple and one block east of the O. S. L. Depot on South Temple Street.

We are always glad to have visitors and we are always glad to have you look over our Modern Machinery, give you any information or advice regarding power on your ranch for tractor work, pumping, feed grinding, etc. Any service you want will be gladly and cheerfully rendered and will help you out wherever we possibly can.

## SPECIAL OFFER.

To any man living in Utah, Idaho, Nevada or Western Wyoming who purchases an Avery Tractor from us at Salt Lake during Conference Week, we will refund his railroad fare from his home to Salt Lake and return.

If it is not possible for you to come to Salt Lake and see our machinery, we have large illustrated catalogs which give full details, cost of operation, design and construction of our machinery which will be mailed you upon request.

Our Service is to help our customers. We want you to use it freely. Will appreciate a call or a letter from you.

References to our reliability will be gladly furnished if desired.

# LANDES AND COMPANY

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UTAH FARMER

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Devoted to Agriculture in the Rocky Mountain Region

OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE

VOLUME XII; No. 35

LEHI AND SALT LAKE CITY, UTAH

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APRIL 1, 1916

## Demonstration Train

Operated by the Utah Agricultural College in co-operation with Nevada Agricultural College and the Salt Lake Route.



HOW THE PEOPLE TURNED OUT TO MEET ONE OF THE PREVIOUS AGRICULTURAL TRAINS.

Those who visit Salt Lake City the coming week will be able to see the Demonstration Train at the Union Station on Friday and Saturday, April 7 and 8. Nine cars of exhibits, twelve to fourteen cars make up the train when it is ready for the trip through Utah and Nevada.

Meetings will be held at all the following places:

Salt Lake City.....	April 7th-8th	Nephi .....	April 28th
Enroute .....	April 9th	Payson .....	April 21st
St. Thomas .....	April 10th-11th	Spanish Fork.....	April 22nd
Las Vegas .....	April 12th	Enroute .....	April 23rd
Panaca .....	April 13th	Provo .....	April 24th
Modena .....	April 14th	American Fork.....	April 25th
Lund .....	April 15th	Lehi .....	April 26th
Enroute .....	April 16th	Murray .....	April 27th
Milford .....	April 17th	Tooele.....	April 28th
Delta .....	April 18th-19th		

Those who will lecture and discuss farm problems are: Dr. E. G. Peterson, Prof. J. G. Scrugham, Prof. Chas. S. Knight, Dr. W. E. Taylor, Dr. F. S. Harris, Prof. J. T. Caine III, Prof. L. M. Winsor, Prof. Ben R. Eldredge, Prof. J. W. Paxman and Miss Gertrude McCheyne.

## Utah Product Show---Farm Machinery

Again we remind our readers of the Utah Product show, an exhibition of Utah Manufacturers showing "Home-made goods" and the Exhibition of Farm Machinery at all the implement dealers in Salt Lake City, during conference week of April 1 to 8th.



## Come In and See Us While You Are In Town For Conference

AND LET US EXPLAIN ALL ABOUT THIS

## Home Study Course of

# Piano Lessons

Just Published

## The Utah Conservatory of Music

OFFER YOU

## Prof. J. J. McClellan's Written, Home Study Course of Piano Lessons

The Course is systematic methodical, and covers 15 years of Prof. McClellan's practical teaching experience. The student covers two years' work in one year's time. Recommended to all earnest students of music and teachers by the best music authorities in the state.

We also have written courses for Band Instruments.

Our course of studies include Piano, Organ, Voice, Violin, Dramatic Art and Band Instructions.

You will save both time and money if you will write us a card or letter, we will then tell you all about this course of Piano studies.

Send us your name and address if you can not come and see us, we want to tell you more about this splendid course of studies written by Prof J. J. McClellan.

## Utah Conservatory of Music

Templeton Building

Salt Lake City Utah

Just across the street South and East from Temple Block.

## Questions and Answers

### FROSTED CORN

Utah Farmer:

Dear Sir:—Last year I planted a crop of popcorn. It came up fairly well, but was frozen down. I did not have the time to plant a new crop at the time, so let it go, and it came up again and I harvested a very good crop from it. The only difference I noticed at all was that the stalks did not grow as high as they did the year before. Is this unusual; and how do you account for its coming up the second time, and making such a good crop?

H. J.

Answered by Dr. F. S. Harris.

Corn that is frosted rarely does as well as corn planted later that is not frosted; the reason being that it usually takes longer to recover from the effects of the frost than to begin again from the seed. It is able to recover when injured by frost because the growth of each leaf and node takes place from the base and where the ends of the leaf are frosted the growing part may not be injured seriously.

Price, Utah.

Utah Farmer:

Gentlemen:—Would you kindly answer for me, through the columns of the Utah Farmer, the following: I have a young horse, between three and four years old, who has a bad habit of biting at anyone who comes in reach of his head. He is not quite so bad when working steady as when idle. I do not know whether it is playfulness or a desire to be mean. I have tried whipping him occasionally but it seems to do no good although if a person has a little stick if nothing more than a foot of corn stalk, he will not bother. He is a good horse and perfectly gentle in all other ways. Can you advise me of a cure for his present disposition?

Very truly yours

Geo. E. Ockey.

Answered by Dr. W. E. Carroll.

Biting Horse: Where an animal bites, as you have described, it is very probable that it is due to lack of exercise and playfulness, since you state that he is not so bad when worked steadily. I would advise giving an animal of this kind plenty of hard work and in this way I believe you can tame him down. However, if he continues to bite at people, it might be well to whip him severely once or twice in the act. Do this so he will remember it and it is very probable that you will overcome the trouble.

### ATROPHY OF THE LEG.

Short Creek, Arizona.

Utah Farmer:

Gentlemen:—I have a colt which is now six months old. When it was a few days old it was injured on the hind leg. The leg has stopped growing and is about an inch shorter than the other leg. What can I do to make the leg grow?

Thanking you in advance, I remain  
Yours respectfully,

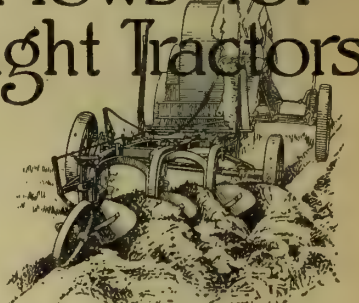
J. R. Lauritzen.

Answered by Dr. H. J. Frederick.

Atrophy of the Leg: From your meager description of the case, it is probable that some of the nerves supplying the leg have been injured. For this reason, too little blood has nourished the muscles; therefore, the

(Continued on page 11)

## JOHN DEERE Plows for Light Tractors



High and Level Lift.

PRACTICAL—the right size for the average farm. Work with any standard tractor. Controlled by the man on the tractor.

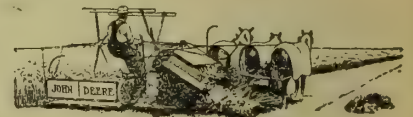
Pull the rope and all the bottoms raise high and level. Another pull lets them down.

All bottoms raise high—like a double bail, high lift horse plow. You know from experience what this means. Plows do not clog or gather trash on the turn.

Extra wide and semi-floating front truck means uniform work and even depth of plowing.

Extra beam and bottom, readily attached, increases a regular two-bottom plow to a three bottom or a regular three-bottom plow to a four, as desired.

Famous John Deere Bottoms with Quick Detachable Shares that are taken off and put on in one-fifth the time it takes to change bolted shares. Booklet free.



## John Deere Grain Binder With All Steel, Quick Turn Tongue Truck

THE Better Binder. Truck turns machine faster than team turns. Saves time in turning, square corners are made, and full swaths taken at the turns.

Stub tongue is all steel, hot riveted—no breaking, splitting or rotting. All steel eveners.

The binder that is noted for its light draft, sure cutting, elevating and tying. Ask for free booklet.



## "R & V" Engines

Dependable Farm Power

"R & V" Triumph—always develops rated horse power—made in 1, 1½, 2½, 4, 6, 8, 10, 12, 16 and 20 H.P. sizes, stationary and portable.

Easily started; perfect speed control (speed can be varied 40 per cent without stopping engine). Complies with insurance regulations. Hopper cooled—a simple, efficient system that does not require long pipes and numerous fittings. Write for free booklet.

BOOK FREE "BETTER FARM IMPLEMENTS AND HOW TO USE THEM"—168 page reference book—tells all about a complete line of implements and how to adjust and use many of them. Worth dollars. Sent free to any one who tells what implements he is interested in. Ask for Package X-160.

JOHN DEERE, Moline, Ill.  
Consolidated Wagon and Machine Co.  
Utah and Idaho Agents.



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1904.

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# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region

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A YEAR.FOREIGN  
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VOLUME XII.

LEHI, UTAH, SATURDAY, APRIL 1, 1916

No. 35

## The Conquest of Alkali

By Frank S. Harris.

A party of tourists recently, in passing over a section where alkali almost entirely prevented the growth of plants, expressed the idea that something was wrong with anyone who would attempt to settle such a country where nothing ever could be made to grow. They said it was a shame for a man to disturb the coyote and badger in a domain that so undeniably belonged to them.

A man who had been a prosperous farmer in the East visited relatives in a Western town where over-irrigation of higher lands had caused alkali to rise on the lower farms which were abandoned one after another. He promptly advised his relatives to "give up the whole thing" and move to some other place.

These examples are representative of what is heard every day in those sections of the great arid parts of the world where alkali is found. It appears like a great monster that can not be overcome by any means.

### Complexity of Problem.

Truly, alkali in the soil is a monster, but that it cannot be overcome, is hardly believed by those who know the means of its undoing. That it is easy to conquer, no one with experience will say; but that its conquest is worth while, is doubted only by those who are faint hearted or who are uninformed.

The means of accomplishing this end vary so much with conditions that no definite rule can be laid down. The methods must suit the needs. They may be simple or complex according to the way in which the problem is presented.

The first step in the conquest of alkali is to determine its immediate source. It may come from the drying up of a saline lake or an arm of the ocean, in which case it is fairly well distributed through the soil, but most concentrated in the low places that were last to dry up. It may come from the disintegration of shale or sandstone layers high in soluble material. Where this condition exists, the alkali will be confined chiefly to the parts of the soil coming from these layers or to the places overflowed by leaching of them. The alkali may come from the drenching of higher lands with irrigation water which removes soluble material and carries it to lower levels where it is concentrated sufficiently to injure crops; or it may come through applying to land irrigation water containing such large quantities of soluble matter that, by its gradual accumulation in the land, the growth of crops is prevented. The remedy

must therefore depend on the source.

### The Value of Prevention.

As with human diseases, so with alkali: an ounce of prevention is worth a pound of cure. Where the salts are already distributed through the soil man can do nothing by way of prevention and his methods must be directed toward a cure.

Where the salts are washed in from high lands by irrigation water, the method of prevention is obviously to use of less water on the higher land. This is not always easy to control since the higher land may belong to some one else who is not interested in the troubles of his less fortunately-situated neighbor. This

question is so important that it must in time be met either by legislation or by some other effective means.

Where most of the alkali comes from certain layers of rock, ties of alkali in passing through these layers and carries it to the land during irrigation. The method of preventing accumulations from this source lies either in fluming the water over these layers or in lining the canals with cement through the worst places.

Where the soil is contaminated with brackish irrigation water the use of this water for irrigation must be discontinued.

### Reducing Evaporation.

One of the most effective means

available to the individual farmer for preventing the spread of alkali is to reduce evaporation of moisture as much as possible. Alkali moves very readily with the soil moisture, and when water rises from the lower layers of the soil to the surface and evaporates, salts are brought to the surface and deposited in concentrations that are injurious to crops. For example, if in the first six feet of the soil the concentration of alkali was only one-fourth that required to kill crops, and all this alkali by means of evaporating moisture were deposited in the surface foot, the concentration would be so great that crops would not grow. One great aim of the farmer, therefore, should be to prevent evaporation of moisture. Any means of doing this such as the formation of a mulch, shading the land, cropping, or the addition of organic matter will be effective in reducing surface accumulations of alkali.

### Wise Irrigation.

The unwise use of irrigation water is one of the chief causes of alkali troubles. Not only is the man on the higher land responsible for damage but each farmer may ruin his own land by water-logging it. If so much water is added that the water table is within a few feet of the surface, evaporation is excessive and alkali will gradually accumulate at the surface of the land. The conquest of alkali can never be complete until a wise use of irrigation water is practiced.

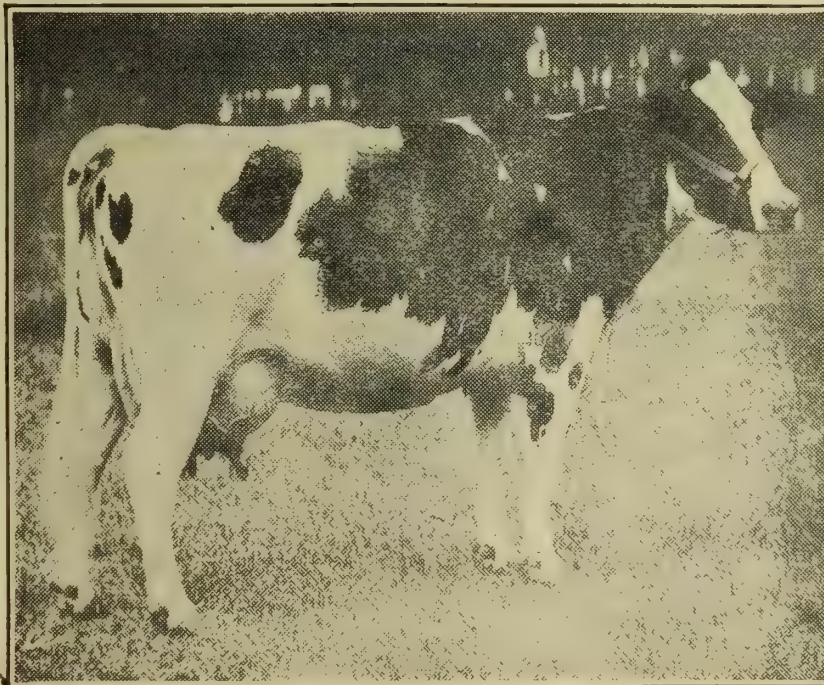
### Manure and Organic Matter

Experience has demonstrated the great value of farm manure and organic matter in improving alkali spots. All the reasons for this are not known but probably among the important ones is the fact that organic matter, whether in manure or in some other form, improves the tilth of the soil and reduces evaporation. It will be remembered that one of the disadvantages of alkali is that it injures the soil tilth; this injury is doubtless neutralized at least in part by organic matter. The decreased evaporation of moisture from the soil lessens the accumulation of alkali at the surface in the manner already explained.

### Gypsum on Black Alkali

It is a well known fact that black alkali, or salsoda, is particularly detrimental to the tilth of the soil where it causes a hard crust to form. It dissolves out of the soil the organic matter from which it gets its black color. This salt which is one

(Continued on page 10)



A GREAT PRODUCING COW.

This is a picture of the Holstein-Friesian cow, Duchess Skylark Ormsby. The results of her 365-consecutive-days' test, conducted by the Minnesota Agricultural College, show that she milked 27,761.07 pounds, nearly fourteen tons, or over twenty-three times her own weight. The butterfat contained in this year's milk yield weighed 1,205.09 pounds, this being a fat percentage of about 4.32.

Figured at cash value, and the dollar and cents' estimate, and allowing 35 cents a pound, she produced about \$500 worth of commercial butter. Think of it! More than thirty-

five 40-pound tubs! The best pervious record for the 365-consecutive-days' butter test was held by Finnerne Pride Jahanna Rue 121083. She produced 642 pounds more milk, but it contained 28.62 pounds less butter than the amount accredited to this cow.

Throughout the test she never missed a feed, never required the services of a veterinary, and was never fed anything but ordinary commercial cow feeds.

To her production of \$500 worth of commercial butter must be added the enormous amount of skim milk and the value of her calf.



# Boston Garter

**THE "Boston"** gives the greatest service because of its superior materials and careful making. It does not crumple or collapse after long wear.



LISLE  
25 Cents  
SILK  
50 Cents

SOLD EVERYWHERE  
GEORGE FROST CO.  
MAKERS, BOSTON

## Before Driving Machinery Into the Field

Before you permit a piece of machinery to leave the shed for active service in the field, see that it is thoroughly lubricated with Golden Harvester Machine Oil. You'll lengthen the life of your machinery and horses by always using—

## Golden Harvester Machine Oil

Reaches every moving part of the bearings and forms a perfect lubricating film.

EVERY  
DROP  
COUNTS

Get a can of this reliable oil for farm machinery today. Don't be without it.



**Utah Oil Refining Co.**  
Refiners  
Salt Lake City, Utah.

Resources over  
\$6,500,000.

Large loans are easily made by a bank with facilities such as this. We will be glad to discuss your requirements with you.

**Walker Brothers Bankers**

SALT LAKE CITY

Founded 1859  
Oldest Intermountain Bank



Mention Utah Farmer when you write.

## THE USEFUL AND PROFITABLE CREAM SEPARATOR

L. J. Meredith.

The cream separator saves time, risk and money. This is considerable for one machine to do. Where it has been given adequate opportunity to become a regular factor in everyday dairy work it has made itself indispensable. Contrary to the usual order of things, this innovation which necessity compelled many dairymen in the Far West to use, has been making eastward progress across the country.

It has come from the great centralized districts of the West where hundreds of miles separate the dairy farm from the creamery. Dairy farmers in the East used to say that such an implement was a perposterous impossibility on the farm situated in close proximity to a creamery. It would take too much time to separate the cream on the farm. Reasoning stubbornly along these lines some dairy farmers still argue that it is better to haul the milk to a creamery and haul back skim milk and water of doubtful feeding value, perhaps laden with disease-producing bacteria, than it is to separate the cream on the farm and sell it to the creamery.

Perhaps the little time that is lost by separating the cream on the farm may amount to quite an item during the year, but what is that compared to the additional value of the skim milk for feeding calves and pigs, and the risk one assumes in feeding the skim milk from tanks likely to contain disease bacteria?

## SNOWFALL DURING FEBRUARY

From U. S. Weather Bureau Salt Lake City, Utah.

February was a comparatively warm month, and while the snowfall was not especially heavy, it was greater than that in February last year and also greater than the normal, in all parts of the State. Very nearly every correspondent reported that the prospective water supply was greater than the average. The greatest depth of snow reported by the co-operative observers at their stations was 86 inches at Silver Lake at the head of Cottonwood Canyon. The greatest depth in the hills and mountains adjacent to these stations was 318 inches near New Castle.

The most accurate data available at high elevations were procured by the rangers of the Forest Service. The greatest depth reported by them was 103 inches in the Cache National Forest. The condition of the snow was reported in almost every instance as being drifted and frozen. It was therefore, in good condition for late melting.



## CALKO DIP

An insecticide and disinfectant for  
**Cattle, Sheep, Hogs, Horses and Poultry**  
45c qt., 75c half gal.,  
\$1.25 gal., delivered.

## CALKO

**Stock Conditioner**  
Keeps stock healthy and thriving.

**CALKO HEALING POWDER** heals saddle and collar galls, barb wire cuts, etc. Keeps flies flying.

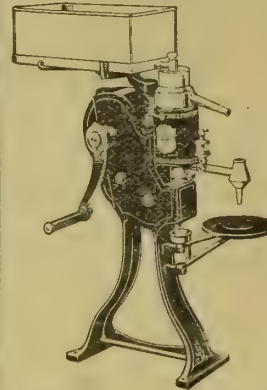
Send in your order.

**CALLISTER-NORTH CO.**

Mediatyre Bldg., Salt Lake City, Utah

# THE UNITED STATES CREAM SEPARATOR

## The "ONLY"



Examine any other separator in the world and see if you can find these important "Only" features. Send for Free Catalogue.

The **ONLY** cream separator with a Nickel Silver rusting skimming device.

The **ONLY** cream separator adapted for thorough mechanical cleaning.

The **ONLY** cream separator with a non-rusting guarantee.

The **ONLY** cream separator with a rustless bowl chamber liner.

The **ONLY** cream separator sanitary from top to bottom made possible by non-rusting metal and superior construction.

The **ONLY** cream separator with a neck bearing adjustable while running.

The **ONLY** cream separator with medium sided gears, all enclosed and all running in oil.

The **ONLY** cream separator to which the crank can be attached to either side.

The **ONLY** cream separator on which crank may remain when operating by pulley on opposite side.

The **ONLY** well-known cream separator that skims Nature's way—cream rising to top, skim-milk settling to bottom.

The **ONLY** cream separator to win a World's Record for closest skimming.

The **ONLY** cream separator from whose bowl all the cream can be recovered or "flushed."

## Vermont Farm Machine Co.

BELLOV FALLS, VERMONT

Chicago Salt Lake City Portland Oakland, California.

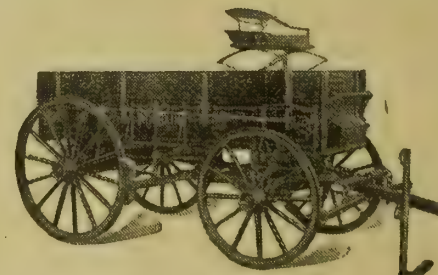


ITS NAME  
TELLS  
A TRUE  
STORY

"At Home  
in any  
Field"

**SUPERIOR** means **THE BEST**—better than the Rest. Your satisfaction is assured when you buy the Superior.

It  
takes  
the  
Bain



to  
Stand  
the  
Strain

Call or Write

## Con. Wagon and Machine Co.

UTAH

IDAHO

WYOMING

NEVADA



## The Value of Our Home Farm Paper

J. W. Paxman, Extension Specialist in Dry-Farming.

It is really astonishing that we could find even one person in these days of enlightenment who occupies the land and follows agricultural pursuits and not be supplied with a farm paper. Astounding as it is there are quite a number accorded the title of farmers in this state who seem content to plod along without any acquaintance of the farming conditions in the state, save those that chance to meet the eye; for they are not wont to read about problems similar to their own in the immediate neighborhood and in various parts of the state.

It is needless to say that such so-called farmers are non-progressive and in reality should not bear the title of Farmer, but should be classed where they rightfully belong as "common laborers;" for the title Farmer signifies more than a mere "laborer." The present day farmer is expected to be a thoughtful, careful, painstaking, sympathetic, intelligent, highminded and persistent pursuer of science—taking NATURE into a close

partnership, and with her, work out the high ideals of a really independent living—one belonging to the highest type of citizenship.

The farmer of today, if he is living up to the mark of his high calling, is the most distinguished and dignified man in all the land; but he cannot be such without constant study, reading of the present day developments and becoming conversant with the problems pertaining to his occupation. He should seek to enrich his life with the best thoughts of other people and awaken his own intelligence by rubbing up against the leading lights in agriculture, both in theory and practice.

The one single medium that best affords this opportunity for the average farmer is the Home Farm Paper. It generally deals with local problems—similar to the problems common to every farmer—and provides material for intellectual as well as material development. It is one of the essential items in the equipment of every farm. Better pursue farming with one horse less and read the local farm paper than to be without it.

I wish every dry-farmer or prospective dry-farmer would read the current literature—limited as it is on dry-farm questions—as published in the Utah Farmer. We would then have less effort in presenting our doctrine and would make better progress in our work on the farms.

Be a FARMER, brother, and not a laggard: read up on the line of your work and advance from the file of a "common laborer" to the rank of a dignified and respected FARMER. Don't let the expenditure of one dollar a year for the UTAH FARMER—the loyal exponent and defender of our agricultural faith—stand in the way of our advancement. Let the mind bristle with the intelligent thoughts gleaned from reading and from practice, then the farm is sure to receive a great benefit and be more likeable as well as more profitable.

### Federal Experts to Aid Utah Fruit Men

As a result of the meetings that have been held recently by the Horticultural interests of the state. Utah will have the aid of two men from the U. S. Bureau of Markets to help solve the problems of marketing our fruit profitably. A conference will be held on April 2nd, at ten o'clock, either at the State Capitol Building, or at the Hotel Utah, at which all of the fruit growers are invited to attend. The Government Experts will be at this meeting, and they, with other men who are taking active parts in this work, will discuss this important problem of marketing the fruit of the state.

An effort is being made to try and form a State Fruit Growers Agency similar to that of the Northwest.

## Attention Sheepmen

25,000

Acres

Summer and fall range in Southern Wyoming.

Also

10,000 Acres

Winter range near Granger, Wyoming, for sale at bargain price.

640

Acres

In most fertile section of Idaho's dry farming district. 50 acres has primary water right and is fenced. Will sell at price fully 30 per cent below market.

We have many other very excellent bargains.

**WALTER ROMNEY**

336 So. Main St.

Salt Lake City, Utah.

## A Stallion to Trade

I registered Standard bred stallion—8 years old and weighs 1250 pounds. Will trade for a registered Draft stallion or a good big Jack.

Write us immediately.

**RICHARDS LIVESTOCK CO.**

Virginia

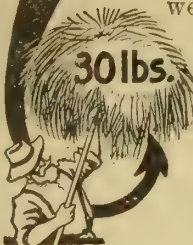
Jesse S. Richards Mgr.

Idaho

"The West's best Durocs"



W. L. LOUDON



## Which Way do You Make Hay

The Loudon Balance Grapple Fork, with its 5-foot spread and its 24-inch tines, lifts an enormous load, binds it tight, drops it clean and spreads it well in the mow. It leaves no litterings to clean up with a pitchfork.

Three or four forkfuls clear the rack. Time? Five minutes!

There is nothing complicated about Loudon Hay Tools. They are simple, sturdy, common-sense tools,

built to handle big loads quickly and easily, and to save time and labor in hay harvest. Equally valuable in field or barn.

Do it the quick, easy and economical way this season. The saving of a few hours in getting your hay under cover may save you many times the cost of your Loudon outfit.

### The Loudon Line Includes:

Hay Tools.

Barn & Garage Door Hangers.

Steel Stalls & Stanchions.

Litter and Feed Carriers.

Horse Barn Equipment.

Animal Pens.

Water Bowls.

Cupolas and Ventilators.



**MILLER-CAHOON COMPANY**

Murray, Utah.

Idaho Falls, Idaho.

## CONFERENCE VISITORS

Call and see us when you come to town. You will be assured of courteous treatment and anything we can do to be of service to you will be gladly rendered.

You may want one of our latest catalogues on Seeds or Poultry Supplies or possibly some information regarding the recent introductions in Grass Seeds, etc.

We are always in the market for Grain, Hay, Seeds, etc., and our record of 51 years fair dealing needs no further comment on our reliability.

## BAILEY & SONS CO.

Established 1865

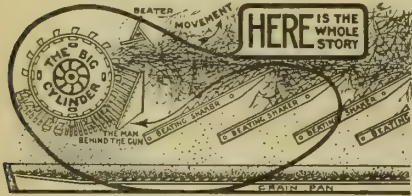
**RELIABLE SEEDSMEN**

Retail Department 63 East 2nd South, Office and Warehouses Corner 5th South 3rd West

**SALT LAKE CITY, UTAH**



FOR  $\frac{3}{4}$  OF A  
NEARLY CENTURY  
**DOMINANT PROGRESS**  
Has made the Red River Special the  
Threshing Machine of the Age



Since 1848 the Nichols & Shepard Company has been interested in one line of endeavor only—the making of machinery for threshing grain. They started their career with a revolutionary improvement in the threshing process that put them in the lead—continued inventiveness of the same bold character has kept them at the front.

#### WHAT HAS BEEN ACCOMPLISHED?

By Beating Out the Grain, a principle that has never been abandoned since originated by this company, more separation, better separation, faster separation, cheaper separation, are all combined in this one machine.

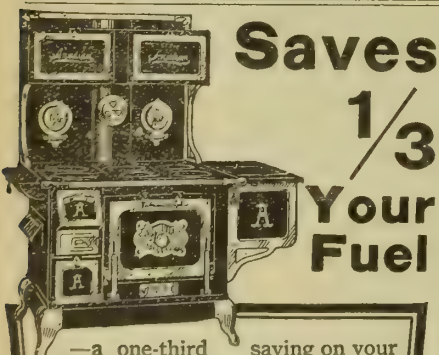
Owning or using a Red River Special rig, you can do more than you can do with any other known make of threshing machine, and it is so written as a part of your purchasing contract.

What do you expect to get when you select another kind?

You ought to read your own neighbor's opinion of a good job of threshing. You'll find it in the Home Edition of the Red River Special paper. Write for a copy and post up. The Big Catalog will be sent also if you ask for it.

**NICHOLS & SHEPARD CO.**  
(In Continuous Business Since 1848)

BUILDERS EXCLUSIVELY OF  
**THRESHING MACHINERY**  
Red River Special Threshers, Feeders, Wind Stackers  
Steam and Oil-Gas Traction Engines  
(3) BATTLE CREEK, - MICHIGAN



**Saves**  
 $\frac{1}{3}$   
**Your Fuel**

—a one-third saving on your fuel bill, year after year, doesn't that make it worth while to find out about this range instead of picking out a range on its "looks?"

It's a perfect baker first and always, and needs no blacking.

**Arcadian  
Malleable  
Charcoal  
Iron Range**

Built like a locomotive boiler. It stays airtight, because it is riveted metal to metal with no stove putty to crumble and let in false drafts, that boost fuel bills, and spoil baking.

Write for inside secrets about ranges, learn how to judge range values and get the most value for your money, FREE. Write today.

ARCADIAN MALLEABLE RANGE CO.  
Dept. 8 Milwaukee, Wis.

## County Agricultural Agents News Letters

**Weber County.** The principal work done in the county has been on the Dairying and Drainage Projects. Seven high class, pure-bred dairy sires have already been ordered by the Farm Bureau, and they expect to make this up to a carload lot. One hundred cows entered test on March 1st. They are investigating the co-operative creamery business. Maps and estimates of cost of two drainage districts are now complete.

**In Salt Lake County** two weeks have been devoted to public demonstrations along the lines of projects outlined for the county. Several co-operators have been signed up in each community for some project. Considerable effort has been spent in getting a better working organization in the county. The present affiliated commercial clubs of the county are composed largely of farmers. They have organized a strong working sub-organization, composed of three county committeemen and three members from each community, the chairman of the local committees to act with the three central committeemen as a County Board. The spirit of things seems good.

**Utah County.** Three Farmers' Schools were held in the county during the month and proved to be very successful. The number of locals in the County Farm Bureau were increased to eleven and the membership to nearly 300. Plans were laid for a very thorough campaign on the treatment of oat seed for smut, and potato seed for its various diseases.

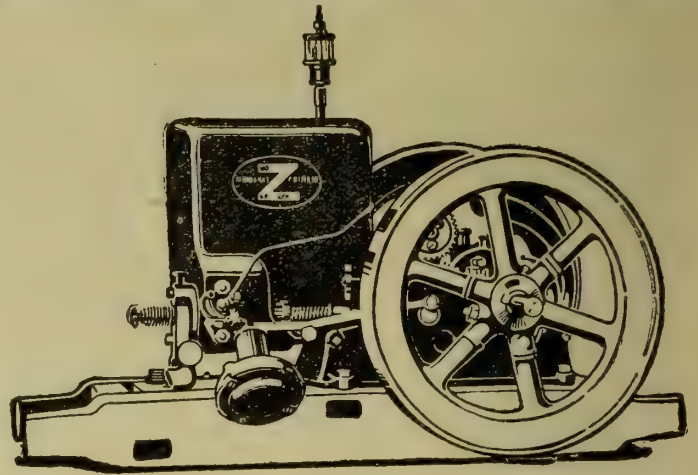
**Duchesne-Uinta.** Considerable work was done along the line of winter pruning of orchards, of home-curing of meat, and club work. The County Agent together with the two County Superintendents of Schools have outlined the plan of club work for the coming year.

**Carbon-Emery.** The principal work done in these counties during the month has been along the line of Farm Management Demonstrations. The Farmers included in the old survey were revisited this year and eleven additional farms were added to the survey.

**Sevier County.** Demonstrations on the treatment of wheat for loose and covered smuts were carried out quite extensively. The Club Projects were more definitely lined up and a number of local one-day schools or institutes were held.

**Millard County.** The County Agent and State Leader worked on a new system of taking records in the Farm Management Demonstration work. The farmers were gathered in groups of about ten at a time. They were given the necessary blanks on which to take their own record. The inventory of livestock, machinery and feed and supplies having been previously copied in the office of the Farm Management Demonstrator there remained only the 1916 inventory to fill in and the receipts and expenses to enter. Full instructions were given these farmers on how to enter the remainder of their record and either or both the State Leader or County Agent was present to assist the farmers as they needed help. As a result of this method 59 records were taken and carefully checked in less than

## It's Here—the "Z"—See It!



### The New Type "Z" Fairbanks - Morse FARM ENGINE

Economical — Simple — Light Weight  
Substantial — Fool-proof Construction  
Gun Barrel Cylinder Bore — Leak-proof  
Compression—Complete with Built-in Magneto

**"MORE THAN RATED POWER  
AND A WONDER AT THE PRICE"**

**1½ H.P. \$35.00** 3 H. P. - - \$60.00  
**F. O. B. FACTORY**  
6 H. P. - - \$110.00

**Ask the Local Dealer  
to Show You This  
Wonderful "Z"**

### FAIRBANKS, MORSE & CO.—CHICAGO

All Fairbanks-Morse dealers sell "Z" engines on a zone carload low freight basis. If you don't know the local dealer write us.

**IMPORTANT DEALER SERVICE:** When you buy an engine from your dealer you deal with a local representative of the manufacturers. He shares their responsibility. He stands behind the engine he sells. He's responsible to you. He's at your service to see that you are satisfied. And he's as near you as your telephone any time you want him.

OPENED JAN. 1ST, 1913



"The HOTEL that's BEST  
in all the WEST"

**WHEN IN LOS ANGELES  
STOP at the NEW  
FIRE PROOF  
HOTEL NORTHERN**  
EUROPEAN  
200 OUTSIDE ROOMS  
150 WITH BATH  
420 W. 2ND ST., NEAR HILL  
NORTHERN HOTEL CO., PROP.  
FRANK L. CRAMPTON, MGR.  
RATES \$1.00 PER DAY AND UP  
CAFE  
IN CONNECTION

When you answer the advertisements in this paper tell them you saw it in the Utah Farmer. Always buy advertised goods.

Mention Utah Farmer when you write.



RELIABLE FARM BARGAINS

This will be a great year for farmers. Plenty of water and high prices.

We have a very wide selection of good farms in Northern Utah and Southern Idaho. This list contains a few of the special bargains.

2½ acres on 15th South and 3rd East; good water right; fine location. Only \$1275 10 per cent down and 10 per cent a year. You can have six years to pay for it.

Several one acre tracts on 16th South and 9th East. Modern improvements; good water for irrigation; city water for domestic use; electric light; telephone; beautiful gardens. This land is being sold on easy terms. Only \$500 per acre.

40 acres, within one and a half miles of the railroad with full water right in the Bear River Canal. Land is leveled and has been plowed and ready for immediate farming. In the heart of a prosperous community. Only \$100 per acre. Ten years to pay with 6 per cent interest.

500 acres of excellent land. 140 head of cattle; 10 head of horses; good house; spring water for domestic purposes; located right on the railroad. Can drive from Salt Lake and back and see the land the same day with an auto. Free open range. Will exchange for Salt Lake property. The price is RIGHT.

Plenty of Money to Loan on Northern Utah and Southern Idaho farms.

Phone—Wasatch 963.

KIMBALL AND RICHARDS  
"Land Merchants"

56 and 58 Main Street,  
Salt Lake City, Utah.

"Utah-Idaho" is the Household and Commercial Sugar

That beet sugar is perfect for household and commercial purposes is shown by U. S. Government Bulletin 329.

Many practical tests were made by the department of Agriculture in fruit canning, preserving, jelly making, etc., after scientific tests had been made which developed that beet sugar is the same as any other highly refined sugar.

The bulletin states that the utter folly that beet sugar is not desirable for these purposes is emphasized by the fact that practically all the sugar used in Germany and France, is from the beet.

Professor Shaw, who conducted a number of the experiments, concludes from his experimental data and other evidence, that under both commercial and household conditions, beet sugar gives equally good results as that of any other sugar made.

Housewives have found it economical to buy "Utah-Idaho" by the sack.

UTAH-IDAHO SUGAR  
ABSOLUTELY PURE

three days, the County Agent spending considerable of his time in rounding in the farmers. Four of the records were from new farmers.

Every farmer who so took his record saw doubly the need of making his record, which he was supposed to have kept last year, complete and up-to-date, and each one agreed to keep full accounts this year. They were enthusiastic over this method of working out their own records. One more year ought to make it possible for them to analyze their own business.

Beaver County. Work on the Potato and Dairy Projects and the two one-week schools held in the county occupied most of the time of the County Agent. A carload of seed potatoes is being shipped in from Sevier County, to be used in the project. In the Dairy Project none but reliable farmers will be taken on as co-operators, and they must agree positively to keep an accurate daily record of the milk production in their herd.

State Leader. The time of the State Leader has been occupied principally in assisting the County Agents in perfecting better working organizations in the Counties to bring the work of the agents before the people, so that it will be better understood, and in working out forms of reports and follow-up cards. The Farmers' Schools have been utilized where possible to bring these various lines before the people.

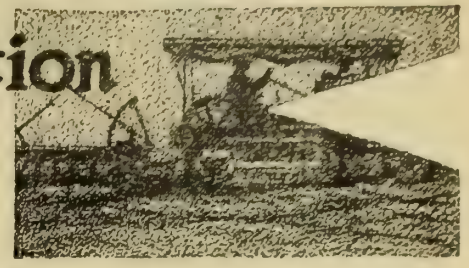
FEEDING AN ORPHAN FOAL

Occasionally one has the misfortune to lose a mare that has a young foal and has to bring the foal up by hand on cow's milk. It should be remembered in a case of this kind that mare's milk is normally sweeter than cow's milk but has only about half the amount of fat and other solids that is found in the average cow's milk consequently it is usual to add sugar to diluted cow's milk for feeding orphan foals.

A method of feeding is suggested by J. H. S. Johnson, of "Breeder's Gazette," which is about as follows: Use an old teapot for feeding, with the thumb of an old kid glove, having a few holes punched in it, fastened over the spout. For a very young foal, feed not more than a cupful of milk five times a day. A dessert spoon of sugar to a pint of milk is about the right proportion. Three tablespoonfuls of lime water added to this ration will correct acidity in the stomach. The milk should be perfectly sweet, the utensils should be kept clean, and the milk should be fed at normal body temperature. It should be obtained from a somewhat fresh cow that does not test too high in butter fat. The milk may be diluted with warm water or skim milk.

After it is two months old, the foal will do very well on skim milk alone to which may be added a tablespoonful of linseed meal. The foal should have comfortable quarters, pasture and fresh water. As soon as it is willing to eat, it should have a grain mixture put in front of it, a little at a time, consisting of possibly one part of wheat bran to one part crushed oats, corn chop or crushed barley. A little alfalfa hay will also be of benefit, especially if the colt does not have much pasture.

When 24 hrs. make a "day" and breakdowns mean \$\$\$\$ lost  
where construction counts



CATERPILLAR  
Reg. U.S. Pat Off

Don't say Caterpillar unless you mean Holt!

Keeping at it, twice around the clock when necessary, without stop for mechanical troubles—that's where Caterpillar construction shows its worth.

Keeping everlastingly at it—turning up the miles of furrow without hitch or breakdown—that's what makes the Caterpillar such a money-maker for its owners.

It's the "know-how" points—big and little—that 30 years' manufacturing experience has taught us, that give the Caterpillar its "stand-up-iveness."

Rigid standards of construction, care-

ful tests, thorough inspection, service after the sale—these bring results in satisfied customers. There are 3,000 Caterpillar owners in 25 countries, more than 1200 in California alone.

The Caterpillar is built in several sizes—there's a size just right for your work. We'd like to send you Folder E 336 which shows the different size Caterpillars built and gives further details of Caterpillar construction.

DROP US A POSTAL

The Grand Prize—highest possible rating—was awarded to the Caterpillar at both 1915 Expositions

The Holt Manufacturing Co., Inc.

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SPOKANE, WASH. PORTLAND, ORE.

CONSOLIDATED WAGON AND MACHINE CO.  
Sales Agents, Salt Lake City, Utah.

Anthony Fence



Under stress of action each wire within a considerable radius is brought into play, affording, to an extraordinary degree, the resistance of a flexible wall of steel—due



to the perfectly balanced woven fabric, in which each wire is drawn under equal tension with machinery of special design. Thoroughly galvanized.

American Steel Fence Posts

Cheaper than wood and more durable. Last a lifetime. Sent Free—write for booklet on how to set posts and erect fence. Every farmer should have it.

DEALERS EVERYWHERE

AMERICAN STEEL & WIRE COMPANY

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in this issue and tell them that you saw their adv. in the UTAH Farmer. They like to know where they get the best returns.





CONCRETE SEWER AND IRRIGATION PIPE.  
They Grow Harder and Stronger With Age. All Other Pipes Decline.  
ABSOLUTELY ALKALI PROOF  
UTAH CONCRETE PIPE COMPANY  
Salt Lake City, Utah.

MODERN MACHINERY  
**LANDES & CO.**  
Phone Was. 830  
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AVERY TRACTORS  
NOVO GASOLINE ENGINES  
AUSTIN WESTERN ROAD  
MACHINERY  
PUMPING PLANTS

FOR  
SALE  
BY  
ALL  
DEAL-  
ERS.



GENERAL OFFICES OGDEN, UTAH

GARMENT WEARERS,  
ATTENTION!

**Temple Brand**  
GARMENTS

The above label is found in the neck of all approved Temple Brand Garments. Be sure it is in the garment you buy.



If WE Insist Today

**Capells  
Sanitary  
Salt**

YOU'LL Insist Tomorrow

**Mail Your  
Laundry**

to us by

**Parcel Post**

—regular city prices for out of town customers.

One trial will convince you.

**Royal Laundry**

SALT LAKE CITY

Something for the Home



**CORONA TYPEWRITERS**  
weight 6 pounds

Agents, A. B. Dick Mimeographs  
Addressing machines and all makes of typewriters.

**UTAH TYPEWRITER  
EXCHANGE CO.**  
36 W. 2nd., South.

INSIST ON  
AGNEW'S  
QUALITY  
**CHEESE**

in tinfoil packages  
10c  
"It Spreads"

**EAR PERFECT  
TAGS**



Samples Free  
**ATTACHED INSTANTANEOUSLY**  
Name and Address. Numbered if Desired.  
LEG BANDS for Poultry, Pigeons, Turkeys  
SALT LAKE STAMP CO. Salt Lake, Utah.



We are the  
people who  
make

VITRIFIED  
CLAY  
DRAIN  
TILE  
for farm  
drainage.

That will not  
decompose with time alkalies or acids.  
SALT LAKE CITY, UTAH.

"QUEEN'S TASTE"

Macaroni, Spaghetti and All "Queen's  
Taste" Products Always Please

WESTERN MACARONI  
MFG. COMPANY  
Salt Lake City, Utah.

METAL POLISH



Agents Wanted  
Delbare's Naptha  
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UTAH STERILINE  
Manufacturing Co., Salt Lake City

NONE BETTER MADE



ASK YOUR DEALER

MACHINERY



Write us Before Placing Your Next Order

Cemetery Lots

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**IRON FENCES**

GRAGER WIRE and IRON WORKS,

531 State St., Salt Lake City.



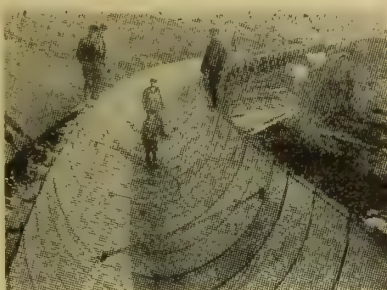
GOOD MORNING!



you are losing 60% of your water through SEEPAGE, which is the average loss in irrigation ditches, use our LENNON Smooth Flume for ditch Lining. Instead of building ditches to carry water across your low places, use Flume. It will not leak and will pay for itself the first year, the water it will save you. Made in all sizes. We sell everything for irrigation.

**UTAH CORRUGATED CULVERT & FLUME CO.**  
Woods Cross, Utah.

ASK YOUR GROCER  
FOR  
FOREST DALE  
SARATOGA CHIPS  
AND  
GILT EDGE BRAND  
HORSERADISH



## OR FIRM NAME

the standard—must be backed up by constant value—or the public will discriminate against them.

The public cannot discriminate against any particular line of unworthy merchandise if it is marketed anonymously along with other anonymous merchandise. Therefore some interests oppose this movement for the fixing of commercial responsibility.

The names on this page deserve your consideration and approval for they are those of firms who "sign" their products, stand back of them and make character, integrity and quality their slogan.

If you buy a wagon, a plow, a pocket knife, an automobile or any food product see that the manufacturer "signs" his name and you are assured of a "square deal."



## CUT RATE TIRES

Not inferior goods, but  
Tires at Better Prices.  
Write or phone us and we will  
quote prices and show you  
we can save you from 25 to  
per cent on tires and tubes.  
So. State St. Phone Was. 2975  
Salt Lake City

## THERE IS NO DIFFERENCE

Great experts agree that highly refined beet sugar is exactly the same, both chemically and diatetically, as the fanciest imported cane sugar. Your purchase of Table and Preserving Sugar brings quality and also upbuilds an industry of the west.

**AMALGAMATED SUGAR CO.**  
OGDEN, UTAH.

## The Philip Bern Company

Painting and Decorating  
Wall Fabrics -:- Wall Paper  
Artistic decorators of Homes,  
Banks and Theatres, throughout  
the Inter-Mountain Country. De-  
corators of the Utah State Capital.  
60 Exchange Place  
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OLDEST KNITTED GARMENT  
HOUSE IN UTAH. WHY?  
QUALITY AND WORKMANSHIP!



ROYALLY MADE  
FOR A  
CRITICAL TRADE

WHEN IN SALT LAKE  
MEET YOUR FRIENDS  
AT



HART'S LUNCH

When you come to Salt Lake  
City, visit  
**MERRILL-KEYSER  
CO.**

at 328 West 2nd South  
Buyers and Wholesale Shippers  
GRAIN PRODUCE, BAGS  
ALFALFA HAY.  
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BUY THE  
"Utopia"  
and  
"U" Cross  
Brands  
of

Hams, Bacon and Lard,  
There is nothing better.

Ask your Grocer and Meat  
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If you have live stock to  
sell communicate with us  
**UTAH PACKING  
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PROVISION CO.**



Two well known brands of Underwear  
Made by the  
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KODAK-KRAFT SALT LAKE CITY





## THE CONQUEST OF ALKALI

(Continued from page 3)

of the most injurious, may be changed to the less harmful Glauber's salt if gypsum, or land plaster, is added to the soil. Thus the treatment with gypsum not only rids the soil of one of the most harmful substances but it causes another which is beneficial to be formed.

Black alkali interferes greatly with the movement of water through the soil, often injuring it so that months are required for water to soak but a few feet through the soil. Where this condition exists, neutralizing the black alkali becomes almost necessary before the later stages of reclamation, especially by drainage, can be accomplished.

### Growing Resistant Crops

It would be folly to attempt to raise crops sensitive to alkali salts in regions where these salts occur in large quantities, especially since a number of fairly resistant crops are available. In tropical and semitropical climates the date palm has been found to thrive in quantities of alkali that would prohibit the growth of many other crops. White sweet clover does well in many of the wetter soils that contain considerable alkali. Sugar beets and alfalfa are resistant after the plants are well established. Barley is probably the most resistant of the cereals while corn is comparatively tender. Peas are among the least resistant of the ordinary crops.

A number of the wild salt weeds and grasses endure much more alkali than the cultivated plants, and they take up such large quantities of the salts that small crystals may be seen all over the leaves and stems. One means of decreasing alkali in the soil is to allow these weeds to grow and then to haul them with the salts they contain off the land. It is a mistake to burn these weeds on the land as the salts are thereby returned directly to the soil.

### Removing from Surface

Since there is a constant tendency for salts to accumulate at the surface of the soil due to the rise and evaporation of moisture, great quantities of alkali are found on top of the land while, the concentration in the soil below may not be so great as to prevent the growth of crops. Here the chief problem consists in getting the surface free. This is done in a number of ways. Sometimes the surface layer is scraped off and piled up or hauled away. This method is too expensive to find any wide use. More often the surface of the land is flooded with water which is allowed to stand in a pond till most of the alkali is in solution when it is drained off. Often the land is irrigated for considerable time and the salts

washed from the surface down into the sub-soil. This method, while effective, is open to a number of serious objections. Sometimes the surface crust of alkali is turned into the bottom of a deep plow furrow, thereby, giving sufficient temporary relief to enable crops to get started. All these methods are but temporary in their effects and are resorted to only until other aids to reclamation can be established.

**Drainage the only Permanent Solution**  
Where alkali in the soil is present over large areas, some form of drainage offers the only permanent and satisfactory solution to the problem. Where only isolate spots are found, there are many practical ways of making the soil productive; where the land is just beginning to become alkali and water logged, preventative measures may be adapted; where the soil is only slightly alkali, resistant crops may be introduced; but where any considerable area is strongly impregnated, the only practical avenue of escape is drainage. Indeed, drainage may be the best solution of the problem even under the other conditions mentioned.

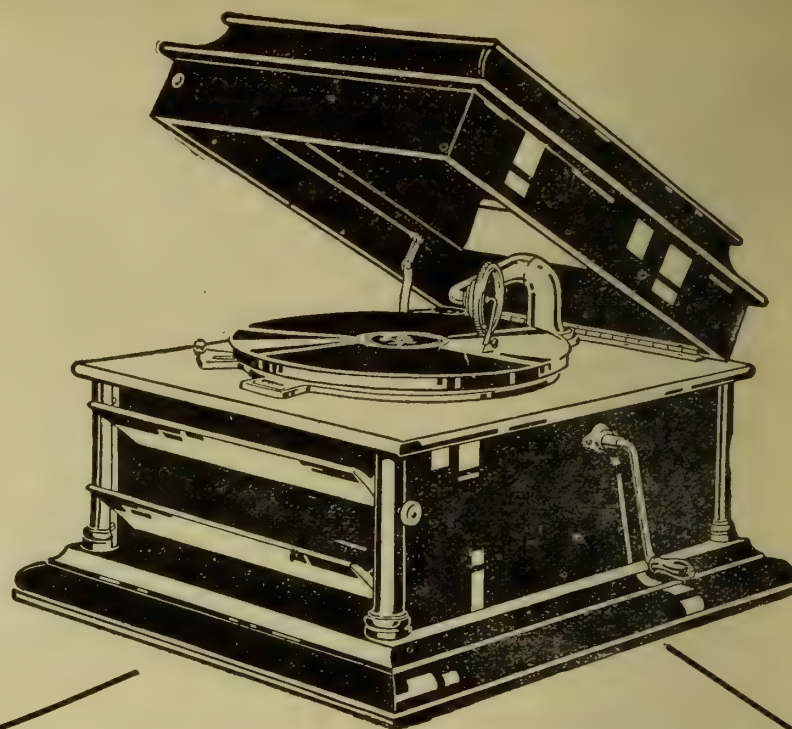
The type of drainage to be adopted varies with conditions. As a rule, some kind of covered drain is much more effective than the open ditch drain which is always being clogged and causing trouble in numerous ways. Clay tile is very satisfactory. Often cement drains can be used, but unless everything is favorable cement is likely to be attacked by alkali and its life shortened by the corrosive action. In regions where land is swampy and has a tendency to slip, box drains made of lumber are more satisfactory than the short joint tile.

One of the greatest difficulties with the drainage of alkali lands is the fact that a number of the alkali salts retard the percolation of water through the soil into the drainage channels. While this may be serious at first, it gradually lessens as the salts are removed. It may in some cases be partly overcome by surface treatment of the land.

The drainage system not only reduces the evaporation of moisture and thereby prevents a stream of alkali's being carried to the surface, but it carries bodily off from the land great quantities of alkali which will never return to cause trouble. With most of the other treatments mentioned, the alkali is not entirely removed from the land but is only transferred to a less objectionable place from which it may at any time return to cause trouble. When a drainage system is once installed, the expense is practically over; while the expense never ends when some of the temporary remedies are used.

### Opportunities in Reclaiming Alkali Land

Some of the best agricultural opportunities offered in the country at the present time are those associated with the reclamation of alkali lands. Many of these lands are situated near excellent markets and are adjacent to rich farming communities where all the materials required to carry on the project are at hand. The lands are usually very cheap in comparison with other lands in the vicinity, and even when the cost of reclamation is added, the price is considerably below what is warranted by its producing power. Reclaimed alkali lands are often among the most fertile that can be found anywhere, especially in regard to the



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amount of plant food which they contain. It seems probable, therefore, that when adequate methods of reclaiming and managing alkali lands are worked out and put into operation, we may look for a development in the agriculture of arid America, such as has not been realized since the days of rapid expansion due to irrigation and dry-farming.

**QUESTIONS AND ANSWERS.**

(Continued from page 2)

shrinkage. I would advise systematic massage. This should be applied two or three times a day over the entire leg. If this does not help to overcome the trouble it might be well to use a stimulating liniment consisting of the following:

- Stronger water of ammonia.....1 part  
Turpentine .....1 part  
Olive oil .....4 parts

This should be rubbed into the tissues thoroughly about twice a day. This should help to bring more blood to the affected part and cause growth of the same. If this does not improve the condition it is very probable that it is a hopeless case.

Henderson, Utah.

Utah Farmer:  
Would you please answer through the columns of your most valuable paper the following: We have about forty acres of heavy sodded land from which we cleared a heavy growth of Sage Brush last summer. We left it for pasture, thinking we would break it this spring. We wish to plant either bearded barley or oats on it. How would you handle the sod in regard to plowing and arranging the seed bed? Which of the grains would you advise planting?

Also how would you plant and care for oats under irrigated conditions, where the season is short, say, from May 20th to September 5th?

Yours truly,

Henderson Bros.

Answered by Dr. F. S. Harris.

I should plow the heavy sod shallow—about 4 inches—being sure that it was all well turned over, then should thoroughly disk it until the sod was well cut to pieces and a good seed bed formed. Either oats or barley could be planted, but I should plant the crop early in order to have it get ahead of the grass. If planted early barley or oats should be ripe before the September frost.

**ANOTHER WHACK AT THE DOCTOR.**

A man had been operated on for appendicitis and was rather slow recovering. He consulted his physician again a few weeks after leaving the hospital to find out what was the trouble.

"Doctor" he said, "I feel all right except for a terribly heavy feeling in the pit of my stomach. Also every time I walk there is such a strange noise, a kind of metallic rattling and it makes me nervous and embarrassed too. What in the world causes it?"

"Good luck," cried the doctor, slapping his thigh! "I knew my pet case of surgical instruments would turn up some day! They must have accidentally been sewed up in the abdominal cavity. Please pay me for them and you can keep them. Otherwise I can operate again and remove them. Take your choice, as the cost will be practically the same."

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**P & O Beet Seeders**

P & O Beet Seeders are up to date in every respect. The accompanying cut shows the regular equipment. The feed mechanism can be adjusted to plant any quantity desired. All cups are adjusted at once. Large seed capacity. Press wheels have open center, concave tires.

Can be furnished for planting in rows 16, 18 and 20 inches, or 18, 20 and 22 inches apart, as ordered. Openers and press wheels can be raised or lowered together, or independently. Can be equipped with an efficient Fertilizer Attachment; also an Irrigating Attachment.

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P & O Beet Cultivators are made in two and four row, and can be equipped to meet varying conditions. Furnished as shown, or with irrigating shovels, duck feet, deer tongues, knife weeders, disc weeders, spiders, crust breakers and shields.

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Walking or Riding. The P & O Riding Beet Puller is the only one on which the operator sees the beets just in advance of points. The points are reversible. The P & O Walking Beet Pullers can be furnished with Riding Attachment. Full equipment.

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**WILKES STOCK CO.**

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**"Shore Acres"**



### TIME TO PLAN ANNUAL FLOWERING PLANTS IN HOTBEDS

Many garden lovers who are envious of their neighbors' earlier blooms fail to realize that they can do many things to give some of their plants an earlier start. Those who own hotbeds or cold frames, the specialists of the U. S. Department of Agriculture say, should see to it that their annual flowering plants are started at once. This advice applies to those flowers to be used later in beds and to those grown for cut flowers.

Some of the flowers which give particularly good results if started in hotbeds or cold frames are:

Agertum, Alyssum, Aster, Calendula or Pot Marigold, Calliopsis, Campanula, Caster Bean, Chrysanthemum, Cockscomb, Cosmos, Four-O'clock, Godetia, Marigold, Petunia, Sweet William, Scotch pink, Scarlet Sage, and Verbena.

The seed of some of the flowers listed below need not be started in hotbeds but can be sown later in the season in the open ground and then transplanted to their permanent locations. The seed of these flowers should not be sown until the ground is in condition for making a good seed bed and until there is no longer likelihood of a heavy frost in the locality. A good test to determine whether the garden soil can be worked well is to take up a mass of it in the hand and compact it into a ball. If this ball readily falls apart, the ground is dry enough to be worked. It is particularly important in planting flowers to spade up the ground, fine it thoroughly with hoe and rake and remove the stones and lumps from it. The actual surface should be made very fine and soft. In planting each kind of seed the directions as to depth of planting should be carefully followed. Flowers that can be sown in this way are:

Ageratum, Alyssum, Aster, Pot Marigold, Calliopsis, Campanula, Clarkia (shade), Cockscomb, Dahlias—single, Godetia, Gaillardia, Mignonette, Pansy, Pinks, Rudbeckia, Snapdragon, Stocks, and Zinnias.

Most of these may be sown earlier in a hotbed or cold frame and thus be made to bloom earlier.

Certain other flowers die or do not do well if they are transplanted. These therefore should be sown only in the open ground or bed where the plants are to grow. The varieties which it is best to sow in a permanent location are:

California Poppy, Candytuft, Corn Flower, Forget-me-not, Lobelia, Nemophila (shade), Phlox, Drummondii, Sunflower, Sweet Peas.

Sweet Peas should be in the ground as soon as it is dry enough to work. The soil should be spaded up and well prepared and then a trench should be dug 4 inches deep; in the bottom of this the peas should be planted about 2 inches apart. When the peas are to be grown over chicken wire or brush stuck in the ground it is customary to sow them in two parallel rows, 6 to 8 inches apart. In this way on the same amount of trellis double the number of plants can be grown with satisfactory results. Sweet peas thrive best in a cool, moist climate. Because of this it is especially desirable to sow very early in the spring.



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Salt Lake City, Utah

GENTLEMEN:—After using your Howe Weeder and Summer Fallow machine sixty days, we are pleased to say it has saved us at least \$150.00 already in our weeding work. It does double the work we were doing before with one man and five horses, and does it better. It is by far the most successful machine for cutting out weeds and doing summer fallow work we have ever used, and we take great pleasure in recommending this machine to dry farmers as the best tool for this work we have ever seen.

Very truly yours, J. W. GRACE,  
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## Howe Weeder

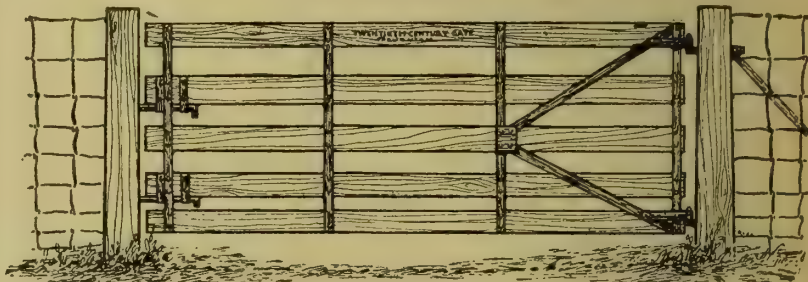
We make several sizes but recommend the 6-disc size, cuts 42" wide with 4 ordinary horses \$140.00  
7-disc size, cuts 49" wide with 4 large horses \$150.00  
8-disc size, cuts 56" wide with 5 large horses \$160.00  
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The 7 Disc Size will successfully weed and summer fallow 1 acre per hour. Order early as we cannot promise prompt delivery on late orders.

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We guarantee every subscriber against loss thru dishonesty or attempted swindle by any advertiser in this publication. We do not attempt, however, to adjust trifling differences between the subscribers and honest responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within thirty days from date of the transaction, and the subscriber must have mentioned Utah Farmer when writing the advertiser.

Start right now and swat the early fly. The first warm days bring them out so go after them, don't let a single one escape.

Clean-up days are here. See that your place is put in fine shape. All rubbish, tin cans and other menaces to public health should be hauled off, burned or destroyed.

It is not the number of head of stock, sheep, hogs, or cattle that one can produce on an acre which tells the story of profit and loss, but it is the number of pounds that count.

There is a great deal of water in the ground at this season of the year. How are you planning to keep it there for the time when it will be most needed by the growing plants.

With the spring days come clean up days. See that every thing around your home and farm is cleaned up. It helps the looks of a place and, what is more, a clean place is usually a healthy place.

A number of politicians have already selected themselves for the offices to which they aspire, and are laying their plans to secure the nominations. It occurred to us that the people should have some choice and selection as to who should represent them in our public offices. As long as the people will allow politicians to do their own selecting, and run the business, they will accept of the responsibility, and many times use the office for their own selfish interests.

#### POTATO MARKET

There seems to be a shortage of potatoes in the Eastern States. What this will mean in the

way of increasing the price of potatoes that are now in storage we are unable to say. The man who has to buy seed potatoes ought to make his arrangements right away, and the man who has a large stock of potatoes to sell can afford to thoroughly investigate the market before he sells.

#### PLANT SOME FISH

At a recent meeting held in Provo, Chief Deputy State Fish and Game Commissioner, Mr. Madsen, told those present that, acre for acre, Utah Lake should produce five times as much as our valuable farm lands. Many small lakes and bodies of water are to be found in different parts of Utah and Southern Idaho and they could be made a source of profit if they were planted to some kind of fish.

Why not take the matter up with the Fish and Game Commissioners and get their aid in helping make these small bodies of water profitable?

#### RANGE CATTLE LOSSES FROM DISEASE

The problem of keeping our ranges as free as possible from contagious and infectious diseases is one that should have the united effort of all the stockmen using them.

Besides the losses from diseases there are many parasites that, if removed, would increase the profits of cattlemen who use our ranges.

If a careful tabulation were kept of all the stock that dies on the range each year the amount would be surprising. While we are discussing Rural Sanitation and our Annual Clean Up in the rural communities, it will be a good idea for the men who use the ranges to see that all dead animals are properly disposed of, and particularly see that none are allowed to pollute the streams of water from which the other animals drink.

We have not yet had a really serious outbreak of any contagious disease among our live stock in this state, but the old saying is, "An ounce of prevention is worth a pound of cure," and this is well worth considering, the question of protecting the ranges from contagion and infection, also from parasites.

#### AIMLESSNESS

The trouble with a great many men, in all walks of life, is aimlessness. They have no definite aim, no standard, toward which they are striving. The merchant has not pictured in his mind a finer, larger, more progressive store—toward which he is always working.

The manufacturer puts out the same old machine year after year as though improvements were unnecessary.

The farmer does not have in view a definite plan for farm betterment including clean fields. A No. 1 fences, good buildings, etc.—in short an ideal, practical farm.

The minute any one makes up his mind fully to attain to some definite improvement, some definite advance, that minute progress has begun.

We must think these better things, settle them in our minds and then strive toward them. We have an aim in view. That once attained we will, of course, have another and thus have entered upon a career of systematic progress. This is life. To stand still is to die.

There is no end to progression. What is considered alright today, is behind the times tomorrow you must think, read, plan and act if you are one of the leaders.

#### DR. WIDTSOE'S WEEKLY MESSAGE.

##### HENRY WALLACE'S SUCCESS

##### —ONE CAUSE

When men achieve great things the thinker tries to seek out the secret of their success. As a rule, a few simple principles produce success, providing the opportunity is open.

The success of Henry Wallace, who when ruined at 59 years of age founded one of the most powerful agricultural weeklies, and in 21 years became a national figure with national influence, is transparently simple to those who followed his career. There was no mystery about it; no hocus pocus, or "pure luck."

The one great key to his success was that he was religiously minded. He knew that his God lived; he knew that the moral code is to the world of material fact, as is life to the clay; he knew that in human love and charity lay more strength than in the dynamite of the chemist, for the shaping of the earth. Therefore he was a man of peace; who spoke as a prophet in chastisement of evil, but for the good of man. Therefore, also, every issue of his paper had the spiritual message, the lesson for the Sabbath, and the well drawn moral of the events of the day. Thousands of homes no doubt followed Henry Wallace's lesson in Wallace's Farmer in their Sabbath service.

Moreover, the man did not believe in the end of things. There was no end to him. He and the world about him were to go no forever to greater and greater heights. There was no end to the road. Certainly such a conviction could fail to produce hope and courage and a smiling joy in the things of life.

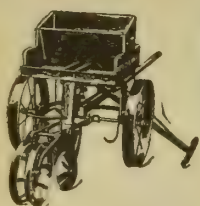
This deeply religious nature was one of the main causes of the success of Henry Wallace. The history of men, through the long recorded years, shows that the great majority of great men have been possessed of high spiritual fervor. Those who only see darkness ahead, who believe themselves governed by inflexible, unintelligent, undirected laws, seldom achieve great things. The conditions of life overcome them, and they fail to give greater life to their fellow men.

Henry Wallace has taught us again a deep lesson of life. Around a thousand firesides of the farms of Utah, the families gather, it is to be hoped, to speak of the things that lie beyond the immediate concerns of life, of things spiritual. If this be done, then from the farm boys and girls of Utah shall come the leaders of our State.

Many of us remember Henry Wallace as he looked when he visited Utah a few years ago with Roosevelt's Country Life Commission. Large of body, kind eyed, patient, with the love of God and man in his heart—as a prophet of old. We of this State are grateful for the lessons he has taught.

There is a movement in Congress at the present time, that, if carried out, will very materially effect the parcel post system that we now have. The farmers of this state know what it means to have a good parcel post system, and they should do what they can to see that there are no changes made except for the betterment of this modern convenience for the farmers.





## Popular Potato Planter

AT A  
POPULAR PRICE

With the great variety of sizes of pieces used for potato seed it has been found impossible to design MACHINERY to do anything like accurate work in dropping the seed at the desired distances and to deliver each and every piece into the ground uninjured and certain to sprout.

With a KEYSTONE Hand-Drop Planter this uncertainty has been entirely overcome and with this machine there is neither waste of expensive seed nor high-priced land. Strong, durable, simple; it is the ideal machine for the practical potato raiser.

Send for Catalog.  
A. J. PLATT, MFG. Sterling, Ill.  
**MILLER-CAHOON CO.**

General Agents  
Idaho Falls, Idaho—Murray, Utah.

## A Saddle for \$36 Cash

Our latest Swell Fork Saddle, 14 inch swell front 28-inch wool lined skirt, 3-inch stirrup leather, ¾ rig, made of best oak leather, guaranteed for ten years; beef hide covered, solid steel fork.



**The Fred Mueller Saddle and Harness Co.**

Dept. A.  
1413 Larimer St.  
Denver, Colo.  
Send your name for our 1915 catalogue, now ready.

The Celebrated Mueller Saddle

## DAHLIAS



**Nineteen PLANTS**  
Exceptionally Good Show and Fancy  
**DAHLIAS**  
For \$2.25  
POSTPAID.

**Five Grand Whites**—Including MRS. T. WINTERS—the grandest white under cultivation.  
**Five Extra Fine Yellows**—Among these is the KAISER WILHELM, a very large deep yellow tipped with cherry red.

**Six Rich Colored Reds, Purples and Maroons**—The NAVAJO, included in this six is one of the finest Dahlias grown. The large flower, rich intense red color and dark foliage, make it a most desirable Dahlia.

**Three Beautiful Pinks**—among which is the wonderful shell-pink MADAM VON DEN DAEL, a truly wonderful Dahlia.

This grand collection includes only show and fancy varieties. We list also a large assortment of Cactus and Pompon Dahlias in our New

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Sent on request. Let us send you a copy today.

**Barteldes Seed Co.**

1435 Sixteenth Street, DENVER, COLORADO

**RAT CURE**  
TABLETS  
ONLY RATS WILL EAT  
TRY BEFORE YOU PAY  
KILLS 4 RATS FOR 1 CENT  
MORISRITE MFG. CO., Dept. BLOOMFIELD, N. J., U. S. A.

## POULTRY

Sandy, Utah.

Utah Farmer:

Will you be good enough to answer the following question in your valuable paper? How many square feet per hen, for a scratching pen.

A Subscriber.

Answered by Prof. Byron Alder.

The number of square feet necessary for each hen in the poultry house and scratching shed depends on whether the fowls are to be kept in the building all the time or to be allowed to run out on good, dry, well-drained soil during the large part of the year. If the fowls are to be kept in all the time, from four to six square feet per fowl should be allowed. Where they are allowed to run out, the space can be reduced considerably depending upon the weather and soil conditions.

Nephi, Utah.

Utah Farmer:

Could you please tell me how poison works on chickens. I lost one hundred this last fall they were all nice young hens and the roosters. The hens would eat alright and go on the nests and lay their eggs and just come of and fall over dead. I have thought that they must have got poison in some way and what lived got the Roup afterwards.

M. A. W.

Answered by Prof. Byron Alder.

The effect that poison would have on chickens would depend on the poison and the amount received. You do not state whether these fowls all died about the same time or whether the time was strung out over several days. It may have been a contagious disease of some kind that killed your fowls or it may have been poison. Ptomaine poisoning from feeding partly spoiled foods, and especially meat foods, is not uncommon. Throwing fruit or vegetables that have been put up in jars and have spoiled out where the chickens can get the same has been the cause of death of a number of very fine flocks here in the state. Tainted food of any kind, or food that has started to ferment should never be fed to fowls.

Utah Farmer:

Gentlemen:—1. Is there any feasible yet effective way to cull out the non-layers without using the "trap nest," which takes too much time for a farmer to use, as he seldom has the time.

2. What causes the yolk of the egg to be of a light color?

3. Does it pay to sell all hens at 1½ years or will you get better results the 2nd season?

4. Which has proven to give the best results the "heated" brooder or the "fireless"? How many chicks would you advise in a fireless at one time?

5. Would a person get better results on the farm by keeping laying hens in less than—say 50 or 60?

Thanking you in advance.

A would be farmer.

C. H. Davis.

Answered by Prof. Byron Alder.

There is no way to pick out the non-layers that is being practised at the

(Continued on page 15)

## Every Farmer Knows

—that **COMFORT** and **EASE** don't generally go with hard work, but—

**SCOWCROFT'S MADERITE**

work shirts make hard work **EASY**.

Next Time Buy

**SCOWCROFT'S MADERITE**

you'll be surprised how much **COMFORT** and **WEAR** a **REAL** work shirt can give and how **EASY** your work seems in a

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ASK THE MAN  
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In traveling, you are entitled to stability—service, and protection, for every dollar you expend—

The Union Pacific System has been termed, "The Standard Road of the West;" it is "standard" in everything the world implies.

Six trains east daily; two trains north and northwest.

**CITY TICKET OFFICE, HOTEL UTAH,  
SALT LAKE CITY, UTAH.**



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For the Buyer

This market place offers our subscribers and readers a very good place to advertise. If you have something to sell or want to buy here is the place to tell it. These advertisements are read because they offer bargains, your bargain should be here. Take advantage of this opportunity today.

For the Seller

## Gem Herd of Improved Chester White Swine.

This Herd Bred, Raised and Sold. Both Boar and Sow Grand Champions of the World's Fair held at Frisco this last year. Both Sire and Dam, is still in the herd. If such breeding interests you, write for illustrated catalogue. Stock of all ages for sale at all times.

Address

**GEO. H. LAWSHE**

Falls City Idaho

### FOR SALE

Foundation Stock in Holstein Fresian's and Duroc Jerseys. Will exchange a few for hay or grain. For breeding and particulars write JOHN W. STUBBS R. D. No. 2. Provo, Utah.

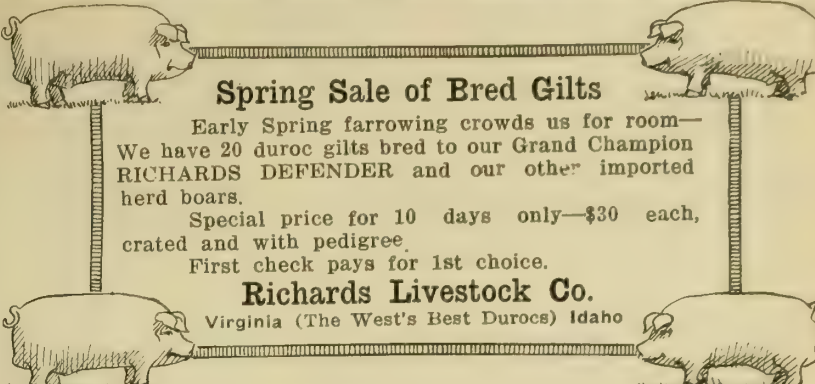
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A BARGAIN  
"SEE ME."

100 acres good land under Strawberry valley irrigating project, only 2 1/2 miles from Payson sugar factory, fine proposition for beets and general farming, only \$7500. Terms or take city property at right figure.

320-acre well improved ranch, fine 9-room modern brick residence, one 6-room house, one 4-room house, large barn, extra fine springs (would make good summer resort), good water right, independent electric light plant, land adjoining held at \$150 per acre, located one mile from good town in Sanpete county, first-class stock and dairy proposition; all implements and some stock go with place; improvements alone cost over \$20,000. For quick sale only \$25,000—\$7000 cash, balance reasonable, or might take first-class real estate at cash value.

**GEO. W. DANLEY**

Was. 2989. 707 Walker Bank Bldg. SALT LAKE CITY



## Spring Sale of Bred Gilts

Early Spring farrowing crowds us for room—We have 20 duroc gilts bred to our Grand Champion RICHARDS DEFENDER and our other imported herd boars.

Special price for 10 days only—\$30 each, crated and with pedigree.

First check pays for 1st choice.

**Richards Livestock Co.**  
Virginia (The West's Best Durocs) Idaho

**BABY CHICKS & HATCHING EGGS**  
White Leghorns, Brown Leghorns, Barred Rocks, R. I. Reds, Black Minorcas, Anconas, Buff and White Orphingtons. Prices on application.

**THE ORLAND HATCHERY**  
Orland, Glenn Co. California

**4—BEST LAYING STRAINS—4**  
Rose Comb Rhode Island Reds and White Wyandottes, Single Comb Black Minorcas and White Leghorns. Egg fertility and stock guaranteed. Write your wants. E. C. Blanpied, Box 60, Milford Utah.

### DAY OLD CHICKS

From our own White Leghorns and R. I. Reds, selected as layers from stock "bred to lay" for 4 generations. Also eggs for hatching. Book orders now. Bates and Sons, Provo—R. F. D. 1—Box 310. Breeders of Airdale Dogs—puppies for sale now. Write us.

### BABY CHICKS

Single Comb White Leghorns. The kind that pay for five or six years. Especially bred for long profitable service. Send for booklet. Early orders insure your wants.

**MOUND VIEW FARM**  
R. D. No. 2 Brigham, Utah

**FOR SALE** — Case threshing machine outfit consisting of 60 H. P. steam traction engine, 36 by 58 separator, set eight gang plows, tank wagon, etc. Used only one year and in good condition. Bargain if taken at once. F. N. Bletcher, 521 Eccles Building, Ogden, Utah.

**EGGS FOR HATCHING**  
Pure bred Black Minorca and Buff Orpington. Splendid laying strains. \$1.00 for 15; \$5.00 per 100. Mrs. P. Maher, 639 Seventh Street, Ogden, Utah.

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Farm and Ranch Loans  
in Utah, Idaho,  
Wyoming, Oregon and  
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**MILLER & VIELE**

803-7 Kearns Bldg.  
Salt Lake City.

Wanted to hear from owner of good farm for sale. State cash price and description. D. F. Bush, Minneapolis, Minn.

### DRY LAND CORN

A white corn which chums with drouth and gives the frost the slip. Grown for years on eight inches of precipitation. Good ears and splendid fodder for silage. 10 lbs. 75c, 50 lbs. \$3.00, 100 lbs. \$5.00.

**CHARLES E. BEARD**

Milford Utah

### POULTRY

(Continued from page 14)

present time that is as dependable as the trapnest. Perhaps the best way outside the trapnest is to select birds that show good vitality and constitutional vigor from the time they are hatched—those that are out early and late and are working all the time to get the delicacies that go to make up egg-production, or those fowls that have long, broad bodies giving room for the reproductive organs as well as for the handling of a large amount of food.

2. The color of the yolk depends almost entirely on the feed. During the winter when green feed is scarce the yolk is usually light in color, while in the spring the color gets rather dark due to the large amount of green food available early in the spring. To get more color in the yolk during the winter feed more alfalfa and yellow corn.

3. From results at the A. C. U. we have found that the Single Comb White Leghorns are profitable for at least three years. Would not advise keeping longer. Perhaps the larger breeds should be kept only two years.

4. Both the heated and fireless brooders have their limitations so that it could not be said that either is best under all conditions. Where just a few chicks are to be brooded rather late in the spring, perhaps the fireless brooder would be as successful and more economical than the other. I would not recommend putting more than fifty or sixty chicks in a fireless brooder 20 in. x 20 in. square. With the heated brooder the number of chicks that may be kept in one brooder varies from two or three dozen to 1,000 or more—depending on the size of the brooder and the make.

5. The size of the flock that will give the best results on the farm depends entirely on local conditions and the interest and care of the person in charge.

## Money to Loan

On improved farms with primary water rights, at reasonable rates."

**INTER-MOUNTAIN LIFE  
INSURANCE CO.**

11th Floor Boston, Bldg.  
Salt Lake City, Utah.

## Alfalfa Seed

16c lb. in lots of 100 lbs. or more. 16 1-2c in less quantities. Terms cash.

**Alfalfa Chaff  
Alfalfa Hay**

**A. A. HINCKLEY,**  
Hinckley, Millard Co., Utah

### EGG MACHINES.

Our Leghorns are truly worthy of the name. Hardy Laying Paying Strains. We are offering the biggest chick bargain of the season—try us and be convinced. Ask for circular. MANTI MAMMOTH HATCHERY CO. Manti, Utah.

Mention Utah Farmer when you write.

## CHERRY CREEK DAIRY FARM OFFERS YOUNG BULLS

### FOR SALE

Herd Sires: Rag Apple Korn-dyke 13th, Grand Champion Utah State Fair 1915. Sire Ray Apple Korndyke. Dam Fairview Mabel Korndyke. A. R. O. record as a Jr. 3 year old 25.51, Bt 4.83 fat. Rag Apple Valerie. Sire Rag Apple Korndyke 13th, Dam, Princess Valerie. A. R. O. record 23.00 Bt from A. R. O. Dams.

**NELSON BROS. Props.**  
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## BUTTER WRAPPERS

We carry a large stock of the Best Vegetable Parchment Butter Wrappers and Especially Prepared Ink for Printing the same. We furnish them Postage Prepaid at the following Prices money to accompany order.

100	.....	\$ .90
200	.....	\$1.25
500	.....	\$2.00
1000	.....	\$2.75

Send all orders to

**THE UTAH FARMER  
LEHI, UTAH**





# DOLLARS OR DEAD HOGS?

## WORMS! WORMS! WORMS!

Worms are the most deadly enemies of your hogs. All hogs have worms from the time they are a few weeks old. Worms hatch in the stomach sapping the very life blood and vital forces supplied by the food, leaving the animal weakened, a sure and easy prey to disease; worms clogging the intestines, causing fever and indigestion; worms boring through the intestines and working their way into the liver; worms in the lungs, causing irritation, coughing, congestion, jerking in the sides and death, worms wrigling through other parts of the body causing irritation, inflammation, ulcers, decay, pus poison—Death.

When you consider that this trifling outlay will keep you from wasting 20 per cent of your feed in feeding worms and will give your hogs a fine finish in less time, on less feed, you must admit that the money is well spent.

## SEND US YOUR ORDER NOW

—25 lb. SACK ( DELIVERED PARCEL POST ) \$2.00.

—50 lb. SACK ( DELIVERED FREIGHT ) \$3.50.

SAVE YOUR HOGS.

Hog and Worms Mean Dead Hogs---  
Hogs and Calko Hog Powders Mean  
Hog Profit In Your Pocket

DO NOT WAIT UNTIL YOUR HOGS ARE SICK TO DOCTOR  
KEEP THEM HEALTHY—GIVE THEM

## CALKO HOG POWDERS

Worms weaken the hog and makes it easy prey for disease. Calko Hog Powders will rid your hogs of the death dealing worms and when fed regularly will keep them free from the pests.

From five to eight pounds of Calko Hog Powders is all a hog needs from the time it is weaned until it is ready for the packing house. About 50c is all it will cost you to make sure that your hog will live and thrive and bring you the highest market price.

Acknowledged highest authorities declare that more Hogs are Killed by worms than any other cause.

## CALLISTER-KORTH CO.

Office 801 McIntyre Bldg. SALT LAKE CITY, UTAH.



## Mr. Farmer--Mr. Rancher

While in Salt Lake City, for Conference, come in and see us about that farm you want to buy or sell, or if you are in the market for a city home.

We want to know you, whether or not you are thinking of buying or selling.

Come in, make yourself at home, and let's get acquainted. We know the acquaintance will be mutually beneficial to us both.

## Taylor Brothers

"Specialists in Good Farm Bargains"

Hotel Utah Building Salt Lake City, Utah  
Just East Hotel Utah Entrance.

## SPECIAL

High Grade, Carefully Recleaned  
Alfalfa, Red Clover,  
Alsike Clover,  
White Dutch Clover,  
Sweet Clover,  
Grass and Garden Seeds

SEND FOR BIG CATALOGUE  
POULTRY SUPPLIES

## Vogeler Seed Co.

Salt Lake City, Utah



# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region

OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE

VOLUME XII; No. 36

LEHI AND SALT LAKE CITY, UTAH

APRIL 8, 1916

## Men Who Will Occupy New Positions at the Utah Agricultural College



**DR. E. G. PETERSON**  
Who will become President of the Agricultural College at the beginning of the school year September 1, 1916. He has been director of the Extension Division for a number of years.



**DR. E. D. BALL**  
He has been Director of the Utah Experiment Station for the past ten years. His resignation from this position was accepted at a recent meeting of the board of trustees.



**DR. F. S. HARRIS**  
Elected to the position of Director of the Utah Experiment Station. He has been head of the school of Agricultural Engineering and Mechanic Arts of the Agricultural College.



**PROF. JOHN T. CAINE III**  
Selected to be the head of the Extension Division of the Agricultural College. He has been assistant to Dr. Peterson in this department, having had charge of all Farmers Institutes and Conventions.



**DR. R. J. EVANS**  
Will be Assistant Director of the Extension Division and will also continue as State Leader in the County Agent work.



**DR. GEORGE R. HILL**  
Who has been head of the Botany Department at the Agricultural College, was elected as Director or head of the School of Agriculture.



# Home Study Course of Piano Lessons

Just Published

## The Utah Conservatory of Music

announces the publication of

### Prof. J. J. McClellan's Written, Home Study Course of Piano Lessons

The Course is systematic methodical, and covers 15 years of Prof. McClellan's practical teaching experience. The student covers two years' work in one year's time. Recommended to all earnest students of music and teachers by the best music authorities in the state.

We also have written courses for Band Instruments.

Our course of studies include Piano, Organ, Voice, Violin, Dramatic Art and Band Instructions.

You will save both time and money if you will write us a card or letter, we will then tell you all about this course of Piano studies.

Send us your name and address we want to tell you more about this splendid course of studies written by Prof. J. J. McClellan.

## Utah Conservatory of Music

Templeton Building

Salt Lake City, Utah

### HOLLOW TILE FLOOR FOR HOG HOUSES

Ray Gatewood.

Hog growers are often confronted with the question of what type of floors to use in their hog houses. Of course the farmer in building his hog house will want a substantial floor which can be kept dry and warm. The experiment station in the Kansas State Agricultural College has found that the hollow tile concrete floor is the best type for hog houses. The cost is slightly above the cost of the ordinary floors, but it is more economical in the long run.

This tile concrete floor is constructed of hollow building material 4 by 10 by 12 inches over which there is spread a coat of concrete varying in thickness from one to two inches. In putting in this floor, the ground is first graded down to the proper level and slope, and a thin coat of sand spread over the ground on which to bed the tile. The tile is then placed on the ground, leaving cracks sufficiently wide to permit the concrete to run through so that it will adhere to the blocks. The tile concrete floor is one that should be well bedded.

#### Beats Ordinary Concrete.

A floor constructed of this material, is much warmer and drier than the ordinary concrete floor because the air space breaks the capillarity which is ordinarily found in the solid concrete floor.

While a floor of this kind is not as warm as a good board floor, it is permanent if properly put in, and gives satisfaction. It is easy to keep clean and easy to disinfect. There are no crevices and cracks, and there is no absorption as in the case of the dirt and board floors. It is more sanitary and more permanent in its lasting qualities.

#### Board Floors not Sanitary

Board floors are not sanitary because there are always cracks and crevices in which dirt and filth accumulate, they are harder to disinfect and clean, and have to be replaced from time to time.

A dirt floor is liable to become rooted up unless firm clay is used. It is much more likely to become dusty, and any water or filth tends to soak into the ground. Consequently, it is not so sanitary as is the concrete type of floor.

Brick floors are used to some extent but they are not so sanitary as the concrete floors, and are hard to keep clean. They are as cold as the solid concrete floor.

The concrete floors are found to be the best and are giving the best satisfaction, but between the hollow tile concrete and the solid concrete floor, the hollow tile one is conceded first place.

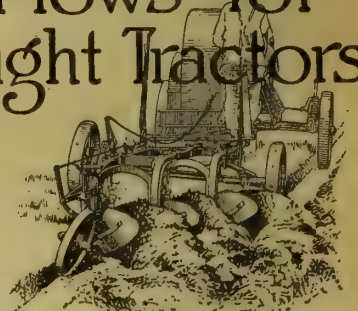
#### A NARROW ESCAPE

Patient: "Great Scott, doctor, that's an outrageous bill for only one week's treatment!"

Physician. "My dear fellow! If you only knew what an unusual and interesting case yours was and what a tremendous temptation I had to perform a post-mortem on you, you wouldn't grumble at a bill three times the size of this."

The Irishman's advice to a long winded speaker: 'When yer get through pumpin', lave go the handle.'

## JOHN DEERE Plows for Light Tractors



### High and Level Lift

**PRACTICAL**—the right size for the average farm. Work with any standard tractor. Controlled by the man on the tractor.

Pull the rope and all the bottoms raise high and level. Another pull lets them down.

All bottoms raise high—like a double bail, high lift horse plow. You know from experience what this means. Plows do not clog or gather trash on the turn.

Extra wide and semi-floating front truck means uniform work and even depth of plowing.

Extra beam and bottom, readily attached, increases a regular two-bottom plow to a three bottom or a regular three-bottom plow to a four, as desired.

Famous John Deere Bottoms with Quick Detachable Shares that are taken off and put on in one-fifth the time it takes to change bolted shares. Booklet free.



### Van Brunt Single Disc Grain Drills

with Adjustable Gate Force Feed

**PLANT** any small grain, from alfalfa to bearded oats, corn and peas, even in trash, gumbo or mud. Adjustable gate force feed compels an even, continuous flow through each seed tube.

They are light weight, light draft, well balanced and strong. Frame is rigid; hopper does not sag; the gear drive is positive and the disc bearings are guaranteed to last lifetime of drill. Spring steel scrapers keep discs clean.



### John Deere Spreader

THREE exclusive features:

1. Beater on the axle—nothing else like it.
2. Revolving Rake—load moving back to beater revolves the rake. Draft actually less. Even spread certain—no bunching.
3. Ball Bearing Eccentric Apron Drive. Requires no attention. Performs wonders in the working of the spreader. Write for Booklet.

**BOOK FREE** "BETTER FARM IMPLEMENTS AND HOW TO USE THEM"—168 page reference book—tells all about a complete line of implements and how to adjust and use many of them. Worth dollars. Sent free to any one who tells what implements he is interested in. Ask for Package X-160.

JOHN DEERE, Moline, Ill.  
Consolidated Wagon and Machine Co.  
Utah and Idaho Agents.



# Rural Credits

Dr. George Thomas, Utah Agricultural College.

Any real cooperative organization must be organized and constructed for the benefits of the members. The members may employ such skilled help as is needed. If we apply this principle to rural credits it means that the farmers must organize and conduct their own associations, if they are to be co-operative. Not only must they be under the control of the farmers, but they must be under the control of those who are using credit. The reason that this requirement is so imperative is because the interest of those in an organization who own stock and do not borrow and those who own stock and do borrow are diametrically opposed. The former wants high dividends which are usually attained by charging high rates of interest; the latter wants low interest, but is not much concerned about the dividends. So in any good rural credit associations the control must always be and remain with the borrowers. Furthermore it must also be arranged that when these members are no longer borrowers that they can be bought out upon the repayment of their investment. The great primary reason for this is that the purpose of a rural credit association is not to make and pay dividends but to furnish cheap money for the upbuilding of agriculture. This result cannot be attained with high dividends and the consequent high rates of interest.

The next essential for the success of a co-operative rural credit association is that the middle man must be eliminated. The farmers must borrow in bulk and distribute the money in small amounts without expense by their local associations. If an elaborate system of retail distribution of money is to be maintained in order to make small loans and to collect the interest in small amounts the rates of interest cannot be materially reduced. Accordingly in European rural credit associations the local association borrows in large amounts and, working according to a prearranged plan, distributes to each of the members the money already arranged for. In this way the entire retail business is cared for by the farmers themselves at a very small cost. These small local associations, comprized as they are almost entirely of borrowers, are affiliated with a central organization which supplies the funds whenever the local demand exceeds the local supply.

No better conception of the idea of rural credits, adjusted in the fundamental principles to the needs of the United States, can be obtained

than by a study of the bill now before Congress. In the main the proposed system divides itself into three principal divisions, (a) The national organization, (b) The district organization and (c) The local organization or the National Farm Loan Associations.

**The National Organization.**  
The rural credits of the Continental United States is under the control of the Federal Farm Loan Board. This

enough capital within ninety days the government will furnish the remainder until the farmers' associations are prepared to supply it. By this means the expensive process of promotion with its attendant high commissions to agents is obviated.

The control of each Federal Land Bank will be in the hands of nine directors, three of whom are appointed by the Government and six of whom are elected by the local

Bank in its district. The local association is controlled by a board of directors consisting of five or more members. The officers of the board consists of a president and a Secretary-Treasurer. They all serve without pay except the Secretary-Treasurer who is to receive a small compensation. The directors are elected by the farmers who are members of the association. The bill specifically provides that it is the farmers who borrow who shall control the association. The directors must appoint in addition to its officers a committee to pass upon the applications for loans and the security offered. Furthermore the loans when made must be spent in accordance with the agreement under which they were obtained. If the money is diverted to any other purpose the loan can be called at once. The plan provided contemplates that the borrower shall have the best advice and assistance that the association can give him.

The local association cannot borrow from the Federal Land Bank in sums of less than \$20,000 and the farmers cannot borrow from their association in amounts of less than \$200 nor more than \$10,000. The loans can be made only on first mortgages on farms and for thirty six years. They can, however, be paid in full at any time after five years. By such provisions the farmers get the advantage of long time money if they need it, but with the opportunity of paying part or all of the indebtedness when it is convenient. The payments are to be made upon the amortization plan, that is the principal and interest are divided into 36 equal payments. The amount loaned cannot exceed fifty per cent of the value of the land.

The purposes for which the loans can be made are explicitly set forth in the act as follows: (a) to purchase a farm for a home, (b) to purchase farm equipment, fertilizers or live stock, and (c) to erect buildings. The aim is to supply money to farmers who live on the land. Every safeguard is used to prevent the use of the funds of the banks for land speculation.

The secret of the success of a private or governmental rural credit association must depend upon its ability to get money in large quantities upon debenture bonds. Debenture bonds are based in land banks upon farm mortgages for their security. If the mortgages are worthless the bonds are worthless. Hence there must be great care exercised in making the loans. In the past it has



LET THE BOY OWN A CALF  
TEACH HIM HOW TO FEED AND CARE FOR IT.

board consists of five members appointed by the President of the United States for a term of ten years. No more than three members shall belong to one political party. This board is to make the rules and regulations and to have general supervision of the entire land banking system of the United States. It is to divide Continental United States into twelve districts and to establish a Federal Land Bank in each district.

**The District Organization.**  
The Federal Land Bank established in each district is to have a capital of from \$500,000 to \$1,000,000 depending upon the population of the district. Each Federal Land Bank may establish such branches as are needed. The capital for these twelve banks is to be furnished by the sale of stock to farmers' associations and to the public. In the event that these two sources do not supply

associations. The stock held by the public does not have the right to vote. In this way the control of the Federal Land Banks can never fall into the hands of individual stockholders and be exploited for dividends, but must remain forever in the hands of the farmers' associations. Persons who buy stock, while denied the right to vote, will receive dividends.

**The National Farm Loan Association.**  
Ten or more farmers in any one locality, who desire to borrow money, may organize local associations. The local association may possess limited or unlimited liability according to the desire of the incorporators. Each of the members of the local association must become a stockholder to the extent of five per cent of the amount of the loan he desires to obtain. Likewise each local association must be a stockholder in the Federal Land

(Continued on page 7)



## You'll Have Easy Running Farm Machinery



Provide your farm machinery with a velvety film in the bearings and all moving parts, by using

## Golden Harvester Machine Oil

the friction resisting all 'round farm machinery lubricant. You'll appreciate the quality and efficiency of this oil when you have used it. Lightens the load for your horses. Get a can today from your dealer.

**Utah Oil Refining Co.**

Refiners

Salt Lake City, Utah.

## ROWE'S HOG OILER

**Kills Lice Cures Mange Prevents Disease.**

Only Oiler made without valves, cylinders or wheels. Can't clog, stick, leak or get out of order. Guaranteed. Use crude or medicated oil. Kills Lice; keeps pens and yards disinfected. One Oiler cures for 30 to 50 hogs. \$3.50 delivered.

**CALKO HOG POWDERS** is a Hog conditioner and Worm expeller. \$1.50.

**HEALTHY HOGS MORE PROFITS**

Catalog Sent Free.

**CALLISTER-NORTH CO.**  
Manufacturing Bldg. Salt Lake City, Utah.

## DAIRYING

### VALUE OF SKIM-MILK.

Skim-milk is very economical food material in the opinion of experts in the Department of Agriculture, and might well be more largely used as human food—this in spite of the fact that it is nine-tenths water. The argument for economy is based on the price at which it is usually sold and upon the composition of the remaining tenth, or the nutritive portion.

Whole milk, as everyone knows, is an indispensable food for the young and even in the diet of the adult it is comparatively economical. The only nutrient taken from it in skimming is butter-fat. There is left, therefore, in the skim-milk not only all of the sugar, which amounts to about four and a half parts in every 100, and all of the mineral substances, but also all of the protein. The last-named substance is important because, besides serving as fuel for the body, as fats, sugars, and starches do, it also supplies nitrogenous tissue building material. The proportion of protein in skim-milk, as well as of the mineral constituents, which are also valuable for body building, is even greater than in whole milk.

Since the nutritive part of skim-milk consists very largely of protein, it is to be classed, as whole milk is, with such food materials as eggs, meat, fish, poultry, and cheese (though it is much more delicate than those foods) rather than with such substances as sugar, which serve only as fuel. Two and a half quarts of skim-milk contain almost as much protein and yield about the same amount of energy as a pound of round of beef. When skim-milk sells for 4 cents a quart, or about 2 cents a pound, and round of beef for 20 cents a pound, a dime, or any other sum of money spent for skim-milk will provide nearly twice as much nourishment as it will if spent for round steak. Round of beef, of course, is one of the lower-priced meats and when compared with the more expensive cuts, skim-milk makes a still better showing from the standpoint of economy. The comparison with oysters is very significant: a quart of oysters contains less than twice as much nourishment as a quart of skim-milk, yet often costs several times as much. Both are useful wholesome foods, and in the oyster one has a special flavor. A combination of the two in oyster stew or creamed oysters is an economical way of using the oysters, since it makes a given quantity "go further."

Whole unskimmed milk has, of course, a more pleasing taste to many people, and those who do not need to consider the additional cost will, no doubt, always prefer it. When used in cooking, however, the difference in taste between skimmed and unskimmed milk is not perceptible, and there are a great many uses to which skim-milk can be put in the preparation of foods. In the making of cereal mushes, for instance, the use of skim-milk in place of water adds greatly to the nutritive value, particularly by raising the amount of tissue-forming materials. In making milk soups, chowders, custards and cakes also it can be profitably used. In chowders the lack of fat is made up by the use of salt pork—New York Produce Review.

# Right Now you need a **DE LAVAL** CREAM SEPARATOR

**1<sup>st</sup>—If you are still using some gravity or setting process of creaming—**

BECAUSE your cows have likely freshened now and your supply of milk is greater.

BECAUSE your spring work requires every minute of your time and a good cream separator will be a great time and labor saver.

BECAUSE your young calves will thrive best with warm, sweet separator skim-milk.

BECAUSE with your increased milk flow your greater waste of cream, without a good cream separator, must run into more money than you can afford to lose.

**2<sup>nd</sup>—If you have a very old De Laval or an inferior separator whether new or old—**

BECAUSE the losses of the poor separator from incomplete skimming, and the tainted product of the hard-to-clean and unsanitary separator mean most when your volume of milk is the greatest.

BECAUSE of the ample and "more than advertised" capacity of the De Laval, you can separate more quickly and save time when time means most to you.



BECAUSE an Improved De Laval Cream Separator is so much simpler and more easily handled and cared for than any other, and you can't afford to waste time these busy days fussing with an inferior or half worn-out machine.

BECAUSE the De Laval Separator of today is just as superior to other separators as other separators are to gravity setting.

Let the De Laval start saving cream for you right now. See the nearest De Laval agent at once, or if you do not know him, write us direct for any desired information.

## THE DE LAVAL SEPARATOR CO.

165 Broadway, New York 29 E. Madison Street, Chicago  
50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER

Resources over  
\$6,500,000.

Large loans are easily made by a bank with facilities such as this. We will be glad to discuss your requirements with you.

**Walker Brothers  
Bankers**

SALT LAKE CITY

Founded 1859  
Oldest Intermountain Bank



Mention Utah Farmer when you write.



**HEWLETT'S  
LUNETTA  
BAKING  
POWDER**

For strength  
For Purity  
For Quality  
For Price  
25c the Pound Tin

Every  
Pound  
Guaranteed.



## QUESTIONS AND ANSWERS.

Riverton, Utah.

Utah Farmer:

Gentlemen: — Will you please answer in your next issue and tell me what is the matter with my Heifer and what to do for her, she has just came in with first calf and the front teats do not give only a drop or so of milk her sack seems full but can't draw any from the front teats. The sack does not appear to be caked only just at the root of the teat and there seems to be a hard core about the size of a Macaroni stick. Can bend it but hot water and lard rubbing don't seem to do any good. The calf is now 4 days old. Please tell me what to do for her if she will not give milk from those two teats with this calf would she likely give milk from them another calf? Answer and oblige.

A Subscriber.

Answered by Dr. H. J. Frederick.

From your description it appears that a portion of the udder has not properly developed. If it is difficult to get the milk through the ducts it might be well to pass a milking tube in order to establish a clear opening. Where a swelling exists at the base of the teat or up in the udder massaging three or four times a day regularly will help. We very often use olive oil for rubbing. If this is done carefully for a number of days

all inflammation or cake should be overcome. It happens, however, that some cows only have two functional teats. This may be the case with yours.

## TEA VINE

Utah Farmer:

How can I destroy what is commonly called "tea vine?"

Answer.

When once established the Tea Vine is very difficult to eradicate. Instances have been known where roots have suckered in the foundation and penetrated through crevices in the wall coming out in the gable.

If the root system cannot be removed permanently, the only practical method remaining is to cut off and keep down all material for the season. In this manner the food supply of the plant is eliminated, since the manufacture of carbohydrate material is dependent on sunlight and the carbon dioxide of the air.

## FULL OF EXPERIENCE.

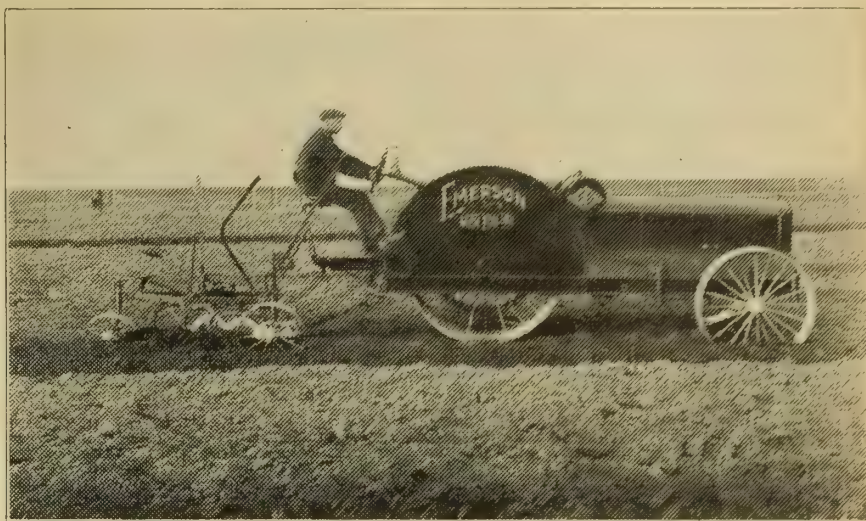
Applicant: "I want a job as street car conductor."

Boss: "What are your references? We can't take an inexperienced man as conductors."

Applicant: "Good heavens, I am plum full of experience; I used to work in a sardine factory."

## Emerson Farm Tractor

MODEL L.



## The Emerson Model L 12-20 H. P.

**A**N ideal Tractor for small or large farms. Light weight — 4 Cylinders — 2 Speeds. Suitable for a wide range of service. Adaptable to practically all soil conditions.

Will pull the implements you now have on the farm, such as gang plows, harrows, mowers, binders, manure spreaders, wagons, drags and small road graders.

A neat, compact Tractor with all working parts perfectly lubricated, thoroughly protected from dust, and easily accessible.

## MILLER-CAHOON COMPANY

Murray, Utah

Idaho Falls, Idaho

# Interlocking CEMENT STAVE Silos



## ANDERSON FARM

Lehi, Utah

12x35 foot silo, 100 ton capacity. A. B.

Anderson, writes that his silo is a complete success.

Information about concrete on the farm, including details as to Silo building, will be furnished free. Just sign coupon below and mail it to us.

Intermountain  
Concrete Co.

OGDEN-UTAH

Please Send Me Catalogue No.3

NAME .....

ADDRESS .....

## Fine Cattle Ranch--Fully Equipped

1340 Acres

300 Acres fine meadow land.

420 Acres bench land.

4000 shares of water out of Bear River.

600 head of cattle. 40 head horses.

This place has a seven room house with water. Large barns, granaries, wagon sheds, etc.

3000 shares of grazing right in Company at a cost of 25 cents per head per year.

Fully equipped with all the necessary machinery and implements.

All for \$70,000.

## Taylor Brothers

"Specialists in Good Farm Bargains"

Hotel Utah Building Salt Lake City, Utah





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Established - - - - - 1904

Entered as second-class matter in the postoffice at  
Lehi, Utah.

Published every Saturday by the  
DESERET FARMER PUBLISHING CO.  
LEHI, UTAH.

Subscription price - - - - - \$1.00 year  
Canadian and Foreign postage 50 cents a year extra.

#### OFFICES

All mail should be addressed to the Utah Farmer  
Lehi, Utah Kirkham Building.  
Our office at Salt Lake City, Utah.  
is at 417 McIntyre Building.

Members of the



New York Office 5th Ave. Bldg.  
S. E. LEITH, Mgr.

Chicago Office Steger Bldg.  
TOM D. COSTELLO, Mgr.

St. Louis Globe-Dem. Bldg.  
C. A. COUR, Mgr.

**Change in Address**—When ordering a change in the address, subscribers should be sure to give their former as well as their present address, otherwise the address cannot be changed. This is a matter of importance to you and to us.

#### OFFICIAL ORGAN

Utah Horticultural Society, Utah State Dairymen's Association, Utah State Bee Keepers' Association, Bear River Valley Farmers' Protective and Commercial Association, Agricultural College Extension Department and Utah State Fair Association, Utah-Idaho Millers' and Grain Dealers' Association, Utah Fruit Growers Association.

#### OUR GUARANTEE

We guarantee every subscriber against loss thru dishonesty or attempted swindle by any advertiser in this publication. We do not attempt, however, to adjust trifling differences between the subscribers and honest responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within thirty days from date of the transaction, and the subscriber must have mentioned Utah Farmer when writing the advertiser.

You don't often hear of a man changing from pure bred stock back to the scrub.

Ask the man who has used a silo during the past winter if you want to know the value it is to the farmer who is feeding livestock.

Don't kill the birds they are a friend to the farmer. They will eat the bugs and insects that each year would do a great damage to his crops.

#### PLANT TREES ALONG THE ROADS.

While you are talking good roads and spring planting, don't forget to plant some good trees along our public highways.

Our highways should be paralleled by rows of attractive trees. The trees, if well selected, would have a value. Nut bearing trees would be alright. Take enough civic pride in your community to see that trees are planted along our public highways. Now is a good time to start.

#### UNTAXED PROPERTY.

The result of an expert going over the records of Millard County and finding more than 12,000 acres which has escaped taxation should be of considerable interest to every Board of County Commissioners. It means that Millard County has been the loser of several thousand dollars in taxes for a number of years.

State Auditor Kelly is authority for the statement that back taxes can all be collected on lands which have escaped taxation. Mr. Kelley suggests that the various counties obtain from the office of the U. S. Surveyor General, and from

the State Land Office, complete lists of all the patented land within their county and then check up.

It will cost considerable to search for the untaxed land, but you will find it worth while because of the increased amount of taxes that will come to you. It is unfair when part of the land goes untaxed and others have to bear all the burdens of taxes.

#### EXPENSIVE TO BE POOR.

A poor man is at a great disadvantage. He lacks money and is compelled to buy in small quantities, and to pay the highest prices. When they are bought, his purchases are not properly cared for—he is unable to provide sheds for his machinery, his equipment does not secure proper upkeep. He is not able to keep his building in proper repair. He must pay the highest rate of interest because he is the greater risk, and capital takes advantage of him in every way. He is handicapped in his forward movement, and growth; and because of a lack of backing he feels a moral disadvantage.

Poverty is expensive in many ways, and this is why people are fighting to obtain wealth. There seems to be only one way that wealth can be obtained, and that is by the method of thrift and self denial. You must save a little, live within your means, make a start, no matter how small, and push ahead. You can not obtain wealth when you spend more than your income.

#### CLEAN ADVERTISING.

It has been a long time since the Utah Farmer accepted any tobacco advertising. We felt that it was objectionable to the high standard we had set for our paper. Only this week we learn that several of the leading magazines of the country have decided that they will not accept cigarette or tobacco advertisements.

We are seeking the good will and patronage of the people of this territory, and we felt that we must make some distinction in the class of advertising we permitted to enter our publication.

We do not accept patent medicines, or medical advertising, liquor, or tobacco. In fact, we try to be as careful of the advertisements that appear in our paper as we are of the reading matter that is printed in our columns. We cannot afford to send into the homes, each week, any reading matter that is harmful, morally or physically, to the welfare of our readers. This applies as much to advertisements as it does to the reading matter.

This is an age of advertising. People are learning the advantage of reading the advertisements. Every business is coming to recognize that it must advertise if it expects to exist. The people want truthful, honest advertisements. It is no longer necessary to make exaggerated statements in order to attract the reading public. Frank honest advertisements are the only kind that will secure the good will and confidence of the people.

We are glad to know that this change is taken place, and we hope that many of our local papers will take this to heart, and not permit their columns to be used by every quack and fake that comes along.

We stand for clean, honest advertising. We have refused a great many advertisements, and we believe our readers will back us up and support us in the stand we have taken.

#### DR. WIDTSOE'S WEEKLY MESSAGE.

##### HENRY WALLACE AND OLD AGE

Henry Wallace, whose death was reported in the Farmer a few weeks ago, was one of the great men of the land. By tongue and pen his clear brain and loving heart sent messages to the people of the United States, which helped keep new and fresh the eternal truths upon which the prosperity and contentment of nations may safely rest. His career, continued actively to the ripe age of 80 years, is a splendid story of man's power to serve his fellow men.

At the age of 59 years, financial misfortune engulfed him, and he stood bare of this world's goods. Then he called his three sons together, —one was in high school, one in college, and one in business—and proposed that they, all together, join to restore their fortune and redeem the family name. Thus was Wallace's Farmer founded. And the paper grew; it became a live and insistent factor in the development of Iowa and many other States. Hundreds of thousands of the farm workers of the land read the wisdom of Henry Wallace in the pages of his weekly paper and shaped their views and actions accordingly.

A few weeks before he died, Henry Wallace celebrated the 21st anniversary of the founding of the paper. It must have been a glorious satisfaction to the great old man to know that the child of his age has reached its majority and was occupying the time and energy of his family.

The lesson is one that he who runs may read. At 59, most men think of retiring. At 59, Henry Wallace founded a new enterprise and made it successful. He remained young until the day of his death, for he had an occupation and a purpose for his time. Almost the greatest work of his life was done after 59 years of age. After that time it was that he became a national figure and his name a household word among millions.

There is no time, whether one is old or young, to lay down the burden and declare it too heavy. Shift and change the burden one may and possibly should as life moves on, but to leave it wholly is unwise. If, when the journey is near the end, misfortune overtakes us, success may yet be won by him who has the young heart and the young faith.

So many farmers look backward and feel that the progress of the day has overwhelmed them, when they should look forward to the greater light which is rising to make all things plain and simple and understandable. The farmer who at 60 leaves the farm and works is usually unhappy and short-lived. The man as 60 or 80 who faces his daily labor finds joy and longer life. So runs the lesson of Henry Wallace who did great work in his old age because the hope in his young heart never grew faint. Let us learn this lesson.

Thousands of tons of barnyard manure are wasted every year. If we fully realized the value of a ton of manure we would be more careful and see that it was put on the land where it would do the most good. Clean up the barn yard before you do all your plowing and see that every pound of manure is properly used.



## Field and Farm

### DISINFECTION OF

#### SEED POTATOES

The treatment of seed potatoes with formaldehyde or with corrosive sublimate has been recommended for many years as a preventive of scab and other disease carried on the tubers.

Such treatment is, on the whole, profitable, but has several limitations which should be clearly recognized to prevent disappointment, according to the specialists of the U. S. Department of Agriculture. The object of disinfecting seed potatoes is to destroy the germs of scab and other surface parasites which might otherwise be planted with the seed and infect the new crop. Only surface infections are reached by this method. It is only partially effective against deep pits of common scab. Formaldehyde is less effective than corrosive sublimate against the black sclerotia or resting bodies of *Rhizoctonia* or russet scab, and against powdery scab. Neither chemical, as ordinarily used, will destroy silver scurf. Either one will kill surface infections of black-leg, but neither will reach the internal infections common in tubers from black-leg hills. Neither fusarium wilt nor late blight infection in potato tubers can be reached by any seed treatment, nor can any of the non-parasitic disease of potatoes, such as mosaic, leaf roll and curly dwarf, be prevented. See Farmers' Bulletin 544 for descriptions of these troubles.

Clearly, therefore, the most important precaution against these diseases is to select clean, disease-free seed potatoes from healthy, vigorous plants, as determined by field inspection during the growing season and at harvest. Seed treatment should then be applied as an additional precaution. It will not be effective, however, if the soil where the potatoes are to be planted is already full of disease.

#### Soil Conditions and Potato Diseases.

Soil conditions have an important relation to potato tuber diseases, and many of these are widely spread throughout the country, perhaps native to some soils. Common scab is favored by a neutral or slightly alkaline soil, and seldom give trouble in acid soils. It is, therefore, increased by liming and by fresh stable manure, wood ashes, and alkaline fertilizers, such as nitrate of soda and ground bone, while acid phosphate and sulfate of ammonia tend to diminish scab.

*Rhizoctonia* occurs to some extent in nearly all soils, but appears to attack potatoes most when the conditions are unfavorable to the best development of the potato plant. Bring the land to an ideal state of tilth to minimize loss from *Rhizoctonia*.

Powdery scab is worst on cold, wet or poorly drained soils. Black-leg, on the other hand, is carried by infected seed. No potatoes showing a deep brown discoloration at the stem end should be planted.

Sulphur tends to prevent common scab. It is not a substitute for corrosive sublimate or formaldehyde, but is a good drier for cut seed. Applied to scab infected soils at the rate of 500 pounds per acre it reduces the

scab, but such heavy applications can not be generally recommended as profitable. Preliminary experimental trials are advised.

#### How to Disinfect Seed

The formaldehyde treatment consists in soaking the potatoes, before cutting, for two hours in a solution made by adding one pint of formaldehyde to 30 gallons of water. The solution can be used repeatedly. The gas treatment is no longer recommended.

Corrosive sublimate is used at the rate of 1-1000 for 1½ to 2 hours. Dissolve 2 ounces of the salt in hot water and dilute to 15 gallons. (4 oz. in 30 gallons). This is a deadly poison. Use with great care. It must also be kept in wood, porcelain or glass vessels as it attacks metal. It is more effective than formaldehyde, particularly against *Rhizoctonia* and powdery scab. Do not use the same solution more than three times as the strength diminishes with each

lot of potatoes soaked.

To treat large quantities, set several barrels on a slightly elevated platform. Fit a plug in a hole in the bottom of each barrel, fill with potatoes, cover with solution, let stand two hours, draw off solution and pour into another barrel. Increase the number of barrels in proportion to the quantity to be treated. Another method is to use a large wooden vat or trough, into which the potatoes in sacks are lowered by a rope and pulley, and later hauled out, drained and dried on slatted racks.

Seed potatoes may be treated several weeks before planting, provided they are not reinfected by storing in old containers or storage bins.

Sprouted potatoes are injured by treatment, but will throw out new sprouts. In general, however, potatoes will not be injured by following the above directions. Many growers believe germination is improved by treatment.

#### RURAL CREDITS.

(Continued from page 3)

been exceedingly difficult to sell

these bonds in the financial markets. In fact it has been impossible. The Federal Land Banks are now going to try to overcome this difficulty by placing the mortgages with a registrar, a government appointed official, who is to retain them and authorize the bank to issue a certain amount of bonds. This is the critical part of the whole system and if it fails all fails, because the capital provided in the banks will not begin to supply the demand.

With the great prestige of government supervision it is hoped that the bad name debenture bonds have acquired in the past will be gradually overcome and investors all over the country will purchase them at such rates of interest as will give the farmer for his mortgage loans cheap money.

The bill does not promise any definite rate of interest. Financiers know this cannot safely be done. No human being can foretell what the interest rates of the future will be. So the safe thing to do is to provide for the lowest rates that the financial conditions of the country will permit.



## Barteldes Orchid-Flowering Sweet Peas Giant Waved "Spencer"

Magnificent large flowered varieties having the edges of the standard and wings beautifully waved and crumpled. Extra fancy stock, that grow to the height of seven feet or more and flower beautifully.

#### Duplex Spencer

Large, wavy, a beautiful cream pink with double or duplex standards.

**Packet 5c**

#### Dainty Spencer

White ground with a beautiful edging of rose pink. Very fine.

**Packet 5c**

#### Asta Ohn Spencer

A handsome flower of a pinkish-lavender color. Very large and wavy.

**Packet 5c**

#### Mrs. Routzahn Spencer

Large flowers with wavy edges. Color is a soft brown tinted with blush pink and shaded to apricot and rose at the edges.

**Packet 5c**

#### King Edward Spencer

Enormous flowers of the genuine Spencer type. The color is a dark rich red.

**Packet 5c**

#### Othello Spencer

A very deep maroon. Very large flowers and a strong growing and free blooming plant.

**Packet 5c**

**One Packet of Each of the Above Spencers for 25c Postpaid.**

We also offer a special mixture of Spencer varieties for those who wish to plant these gigantic sweet peas, but do not care for separate colors. Packet 5c — ounce 20c.

We are headquarters for strictly high-grade sweet pea seed. Our growers give special attention to selecting and cleaning. We have orders from all parts of the United States for our selected strains which are furnished at the price of ordinary sweet pea stocks. Send in your order today. Write also for our big

**New 1916 Catalog Free**

Profusely illustrated. Sent free on request.

**Also FREE, with early seed orders** of \$3.00 or more, choice of Barteldes Farm Guide or Barteldes Cook Book.

**Barteldes Seed Company, 1235 16th Street, Denver, Colorado**





CONCRETE SEWER AND IRRIGATION PIPE.

They Grow Harder and Stronger With Age. All Other Pipes Decline.  
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Something for the Home



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Or the firm name, when favorably known is a great factor in the cost of goods. When a product is ready for market the next question is how to sell it at the lowest cost. Advertising and trade marks work together, they are the most efficient MOVERS of goods—the greatest reducers of selling cost.

Goods that sell quickly should cost less. Products of unknown origin, limited sale, and untrade marked, cost more because of the money tied up that moves slowly, and limits production. You may pay either in increased price or in lower quality—but you pay manufacturers who are seeking to build up a future business or working to raise quality, standardize their goods or reduce the price because of increased production.

Buy trade marked and advertised goods, it protects you and also the manufacturer.

You should trade with a man who is not afraid to "sign" his goods.



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people who  
make  
VITRIFIED  
CLAY  
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That will not  
decompose with time alkalies or acids.  
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INSIST ON  
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CHEESE

in tinfoil packages  
10c  
"It Spreads"

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Samples Free  
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Name and Address. Numbered if Desired.  
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Macaroni, Spaghetti and All "Queen's Taste" Products Always Please

WESTERN MACARONI  
MFG. COMPANY  
Salt Lake City, Utah.

METAL POLISH



Agents Wanted  
Delbare's Naptha  
Washing Tablets.

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NONE BETTER MADE



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Tents, Awnings, Wagon and  
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SALT LAKE CITY

OLDEST KNITTED GARMENT  
HOUSE IN UTAH. WHY?  
QUALITY AND WORKMANSHIP!



LLOYD KNITTING MILLS  
Salt Lake City.



GOOD MORNING!



**EBERHARDT'S**  
SUNSET - BRAND  
FINE MATTRESSES.  
SALT LAKE MATTRESS & MFG. CO.  
SALT LAKE CITY, UTAH.

BUY THE  
"Utopia"  
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"U" Cross  
Brands  
of  
Hams, Bacon and Lard,  
There is nothing better.  
Ask your Grocer and Meat  
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If you have live stock to  
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GARMENTS**  
TRADE MARK REGD. - S.C.



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Our well known brands of Underwear  
Made by the  
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If you are losing 60% of your water  
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EVERYTHING KNOWN IN MUSIC  
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# GRASS SEEDS

# CLOVERS

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The Utah Work Clothes Manufacturers



## THE HOME

### CARE OF THE BABY After the Second Year.

When the baby reaches the third year he should be fed four times a day at regular intervals, having the heaviest meal in the middle of the day.

It is of the utmost importance to teach him to chew his food carefully and thus to take plenty of time at his meals. But since his tiny teeth can only partly masticate his food, this should be properly prepared for him. Meat should be cut into small pieces, vegetables either masaed or put through the colander, and all the cores, skins and seeds should be removed from fruits.

He should not be allowed to drink while eating solid food, lest he fall into the habit of washing down his food before it is thoroughly chewed, as do so many of his elders.

The following foods are recommended for children from two to three years; and a daily program is suggested for the convenience of the mothers:

7:30 a. m.: Cereal well cooked oat, wheat or corn preparation, with thin cream or milk and very little sugar. Cereals should be cooked three hours in a double boiler, and flavored with a little salt when being cooked. Glass of whole milk, warmed in the cool months of the year. Egg, soft boiled, poached or coddled. Toast, or dry bread and butter.

10:00 a. m.: Fruit—use one orange and strain the juice,—or a baked

apple, and two graham crackers, or warm milk, one glass, with dry bread or toast.

2:00 p. m.: Vegetable soup—one teacupful, or, meat broths with rice or arrowroot.

Meat—beef, mutton, or chicken, broiled, roasted, or boiled; or, fish; cut into small pieces, flavored with a little salt. Use no pepper, sauces or condiments.

Potato—baked, mashed, with a little salt, butter and milk, or salt and cream; or, boiled rice or spaghetti, both thoroughly cooked; with butter or cream.

Green vegetables—either carrots, asparagus, string beans, peas, spinach, young beets, or squash, each cooked until very soft, with a little salt in the water strained through a colander or mashed.

Dessert—Apple tapioca pudding, or baked apple, or apple sauce or stewed prunes, or plain custard, or junket.

Drink—Water. No milk at this meal.

Stale bread with butter.

6:00 p. m.: Bread and milk; or cereal, farina, arrowroot, or wheat, or milk, or milk toast, or dry toast or bread with glass of milk.

Raw fruit juice and milk should not be given at the same meal.

Do not give a child of this age any of the following foods: Pork in any form, or salted meats or salted fish, cabbage, onions, celery, radishes, lettuce, cucumbers or raw tomatoes, hot breads, or griddle cakes, sweet

cakes, pastry, syrups, or jellies, nuts or candies, bananas, nor any green or over ripe fruit, tea, coffee, wine, beer, cider or soda water. Mothers are apt to err chiefly in the matter of sweets in feeding children. An excess of sweet food, not only upsets the young stomach but destroys partially the appetite for plain food.

Children should be taught to eat simple, well-cooked food, but should not be forced to eat when they have no appetite. If a child shows a disinclination to eat some special food, which he ought to have, this should be given first at the meal, even if only a small quantity is eaten. Do not fall into the error of scolding the child at meal times, which should be one of the pleasantest hours of the day, full of fun and joy. A little judicious coaxing will usually result in the child's taking the right food in sufficient quantity.

### WHEN YOU BUY THAT NEW CHAIR

Too much care cannot be exercised in the selection and purchase of furniture. A good substantial piece will last more than a lifetime and it is only fitting that beauty of line, finish and design should be considered as well as durability. For the average farm or town home of a family of moderate means the best designs in furniture are those which show solid construction, straight lines and good finish.

It is usually a mistake to buy furniture with a great many curves, spindles or carving about it. For the last decade we have seen too many highly varnished golden oak tables, platform rockers and other pieces, alive with turning, bulging with con-

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These tires excel all others for use in the country over rough and rugged roads as well as on hard pavements. They are as easy riding and resilient as any other pneumatic tire—the air space and pressure being the same.

They are the most economical and "care free" tires made and are used where tires must be depended on and tire troubles cannot be tolerated. Many Double Service style tires are in use in the U. S. government and European War service. Our output is limited to a certain amount, but for a short time we offer the following reduced special prices as an introductory offer:

**PRICES**

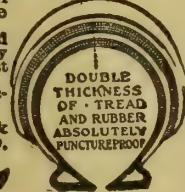
Tires Tubes	Tires Tubes	Tires Tubes
30x8 in. \$ 9.50 \$2.30	36x4 in. \$17.45 \$4.65	
30x3 1/2 in. 10.85 2.10	36x4 1/2 in. 21.20 5.60	
32x2 1/2 in. 12.75 3.20	36x4 3/4 in. 22.50 5.75	
32x4 in. 15.75 4.20	37x4 1/2 in. 23.60 6.20	
34x4 in. 16.70 4.35	37x5 in. 26.30 6.60	

All other sizes not included in above list also furnished. Non-skids at 10% additional.

Terms: Payment with order at above special prices, a 10% discount allowed on orders for two or more tires. All personal checks must be certified.

Try these tires now and be convinced of their very high qualities. Sold direct to the consumer only. Descriptive folder upon request. Write for it.

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tortions and covered with 'carving' which is either glued on or pressed into the wood. If we only had a good fairy to turn those ugly pieces into straight ones, using the same good material.

And the varnish! How cheap looking it is after we have seen the beautiful soft finish imparted by merely waxing or oiling the wood. One doesn't need a fairy to get rid of the varnish. A case-knife, sand paper, varnish remover and elbow grease will do it. Then the piece can be waxed or oiled and the effect well worth the labor expended.

Have you ever seen 'quarter sawed oak' with the grain painted on a cheap wood? Many pieces are sold and they are not worth buying, for the painted grain wears off, leaving the cheap wood exposed. One can usually tell this imitation by careful inspection and the very smooth finish and low price.

So when you get ready to buy that new furniture, let us have it strong and plain, with many straight lines and few curves, no carving, no varnish and no painted grain. Very often there is no difference in price and one recalls the old saying, "A thing of beauty and a joy forever."—Nellie M. Killgore, Colorado A. C.

**MEAT SUBSTITUTES**

Miss Bab Bell.

Many of us are eating entirely too much meat. Meat furnishes protein, which is an important muscle builder and source of energy, but it has two great objections: (1) it costs more and more each year, and (2) it is very likely to putrefy in the process of digestion and form objectionable acids and other products which are injurious to the health. Muscle-building foods of other kinds can be substituted for that furnished by meat if we will use eggs, nuts, peas, beans and similar things instead of meat for one or two of the three daily meals. Fish is not a good substitute for meat from this standpoint as it has the same kind of protein which forms objectionable acids.

The extent to which other foods can be substituted for meat depends in part upon the character of the work being done. Less meat and a greater proportion of meat substitutes should be used by those who work indoors, than by those who are in the open air most of the time, but even those who are working hard in the open air often get along well with little meat after they have been accustomed to the substitutes if the better half has learned how to prepare them in the most appetizing way. For the benefit of those who wish to use meat substitutes a number of dishes and directions are given.

Pecan Nut Loaf.—Mix together one cup of bread crumbs, one cup of pecans, one cup of milk, one cup of boiled rice, two eggs, two tablespoons of butter. Season with salt and paprika and bake in a buttered baking dish. Serve with a cream sauce.

Omelette.—Beat the yolks and whites of four eggs separately. Add to the yolks a thick cream sauce made of 1 cup of milk, 3 tablespoons flour, 2 tablespoons butter, pepper and salt. Fold in the whites and cook in a buttered frying pan. Omelettes may be cooked on top of the stove or in the oven. Small pieces of ham, bacon or

green pepper added to an omelette give an excellent flavor. Cheese is used extensively in omelettes. It should be melted in the cream sauce and then added to the yolks.

Macaroni and Cheese.—Break macaroni into uniform pieces (one cup of macaroni). Drop into boiling water. Boil until tender. Drain and rinse in cold water. Place in a buttered baking dish. Make a cream sauce using 2 tablespoons flour, 2 tablespoons butter, one cup of milk, salt and pepper. Melt one cup of grated cheese in the

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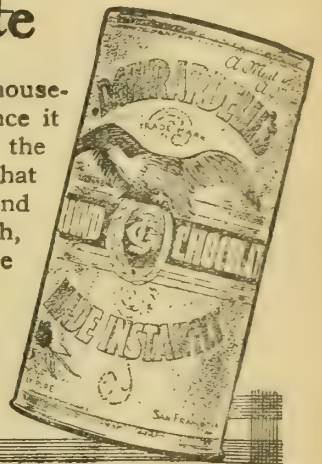
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the very qualities that have made it a household favorite on the Pacific Coast since it was originated by D. Ghirardelli in the early seventies. Not to know—and what is more, not to use—Ghirardelli's Ground Chocolate, is to be unmindful of health, economy and the appeal of a wholesome appetite.

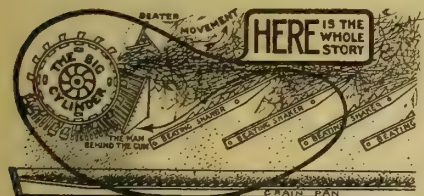
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**THE MAN BEHIND THE GUN**

Our patented device that separates most of the grain right at the Big Cylinder.

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**THE ADJUSTABLE CHAFFER**

That cleans the grain as it should be cleaned, ready for market.

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That gets rid of all of the straw, but none of the grain. This is a special feature, peculiar to the make.

Many of your own neighbors have written to tell us their opinion of the Red River Special and the work that it has done for them. The Home Edition of our threshing paper contains their letters. Send for a copy. Ask for the Big Catalog as well when you write. We'll be glad to send you one.

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Strongest, Most Durable, Most Economical, and Simplest Baler Made—best work—capacity 10 perfect bales in 5 minutes—exclusive features. Fully guaranteed 50 styles. Horse, Belt and Engine Power. Write for free catalog. Whitman Agricultural Co., 6948 S. Broadway, St. Louis, Mo.

cream sauce. Pour over the macaroni. Sprinkle with bread crumbs and bake.



## Questions and Answers

Oasis, Utah.

Utah Farmer:

Gentlemen:—I have a fine mare 7 years old. Last year she became a little lame in her right front leg. She seemed to get worse all the time. I let her run in a field for about four months and did not use her at all, thinking she would get alright, but now she is as lame as ever. If I drive her five miles she gets so lame she can't walk. She has a small enlargement just above the ankle, mostly on the back part of the leg. Can you tell me something to do for her? I need her very much for spring work.

Your truly,

M. H. R.

Answered by Dr. H. J. Frederick.

It is probable from your description that your animal is developing some bony growth of the leg. It would be well to determine definitely where the trouble is located, and then apply a good blister to the part. If above the hoof, a blister consisting of Red Iodide of Mercury and Cantharides (equal parts) together with eight parts of Vaseline rubbed into the affected member along with absolute

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13 Registered Hereford Bulls, also some females, 9 Registered Angora Buck and several Does, a fine lot of grade calves. I will crate and deliver to any R. R. Station in Utah, 5 weeks old Registered Berkshire pigs for \$15.00 each. Check with order.

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We have many other very excellent bargains.

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rest, should overcome the trouble. It would be well to clean out the foot thoroughly in the bottom to find if there is any affection of the sole. If so, this should be disinfected with some good solution and new tissue allowed to fill in the diseased part. If the back tendons are affected, same blister would be good. If the blister has taken a good hold it should be washed away with soap and water. Then apply vaseline and then another blister after the swelling has subsided. If you are not successful with this it might be well to call in a veterinarian to diagnose the trouble definitely.

Delta, Utah.

Utah Farmer:

Gentlemen:—Kindly advise me what course to pursue in connection with a horse that is subject to colic. At times two or five days before an attack he is a trifle bloated and has a shortage of wind, also kidneys do not work freely. I notice slight attacks are also present just after mid-day watering.

His age is four years, is well built and weighs about 1350 pounds.

Any information will be appreciated in your columns.

Thanking you in advance, I am

Yours truly,

R. F. CRUM.

Answered by Dr. H. J. Frederick.

Where a horse is affected as you describe it would be a good plan to give it about a pound of epsom salts or an ounce of aloes when it starts

## Bread Economy

The spinning wheel and the loom have long since left the home. Following close is the old custom of home-baking. Cost of ingredients, your time, fuel, sour batches and burned loaves make home-baked bread cost more than the best baker's bread.

"Bread economy" means to enjoy the purest, most nutritious bread at the lowest possible cost. The real "economy bread" is



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Contains highest food value. Has a flavor and goodness that delights all who partake of its health-giving qualities. Ask your grocer to send you "the perfect bread" fresh every day. Save the labels and wrappers from Royal Breads for valuable premiums.



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Here's your chance to get thoroughbred, vigorous, two year old stock fresh from our Centerville Nursery. Absolutely no culls, every tree first grade.

While stock lasts—all orders reaching us before April 15th on the following varieties, amounting to \$10.00 or more, will be sold at 1-3 off regular catalogue prices:

Pears—Bartlett and Parrish Favorite.

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Apples—Delicious, Pearmain, Sweet Dough, Wealthy, Ey Harvest.

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Peaches—Ey Alexander, Ey Canada, Ey Elberta, Late Elberta and May Flower.

Remember our catalog prices are low and this exceptional discount offer of 1-3 off will move this stock quickly.

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215 acres. 50 acres of water from the Bear River Canal, balance first class dry farm land; all subject to irrigation. Good house, barns and other improvements. On any kind of terms at \$52.00 per acre. If you have a desire to buy a farm that will pay for itself, this is your chance.

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OGDEN, UTAH.

to bloat as you have stated. It is probable that you are feeding this animal too much and that its digestive organs cannot take care of the excessive food given. I would advise cutting down the ration and if the animal should bloat at all or show signs of trouble then above treatment would be the best thing to give it. Care should be exercised in watering animals, not allowing them too much at one time; hence, it will be necessary to water them more often.

Ogden, Utah.

Utah Farmer.

Gentlemen:—1. How is the best way to propagate roses from cuttings?

Mrs. Fred Barker.

Answered by Emil Hansen.

The cutting can be taken from the rosebushes during the months of August and September. Use that year's growth of wood. These cuttings should be from four to five inches in length, and should be cut with a sharp knife just below a bud. Remove the lower leaves of the cuttings. Plant cuttings in a box with clean sand or very sandy soil and keep wet until root formation has taken place. Then plant into pots where they are kept indoors during the winter. They can be taken from the pots the following spring and planted outdoors.

2. How can "blight" be controlled when it affects flowers in the same location every year? What will kill it on house roses?

If you will send an affected limb of your diseased roses to Emil Hansen, Florist, Utah Agricultural College, Logan, Utah, he will determine the trouble for you.

Mother, reprovingly to son: "John, I am deeply disappointed at your marks this month. You stood very much better in your classes last December. What does it mean?"

Son (gaily): "Why mother, you know everything is marked down after the holidays!"

## STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF AUGUST 24, 1912,

of Utah Farmer, published Saturday, at Lehi, Utah, for April 1, 1916. Post-office address, Lehi, Utah. Managing Editor, Business Manager, James M. Kirkham. Publishers, James Kirkham Sons Co., Lessees.

Owners: (If a corporation, give its name and the names and addresses of stockholders holding 1 per cent or more of total stock. If not a corporation give names and addresses of individual owners.) Deseret Farmer Pub. Co.; James M. Kirkham, Lehi, Utah; John A. Widtsoe, Logan, Utah; Thos. Judd, Laverkin, Utah; W. S. Hansen, Fielding, Utah; Jesse Knight, Provo, Utah; R. L. Anderson Estate, Salt Lake City, Utah; L. N. Stohl, Salt Lake City, John Q. Adams, Logan, Utah.

Known bondholders, mortgagees, and other security holders, holding 1 per cent or more of total amount of bonds, mortgages, or other securities. (If there are none, so state.) None.

JAMES M. KIRKHAM.

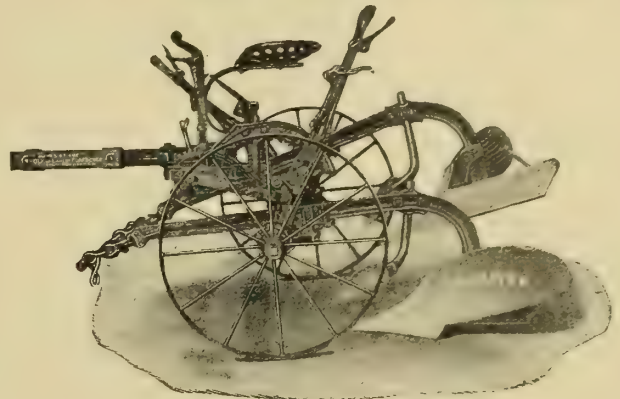
Sworn to and subscribed before me this 23rd day of March, 1916.

(Seal.) E. L. CHIPMAN,  
Notary Public.

# OLIVER

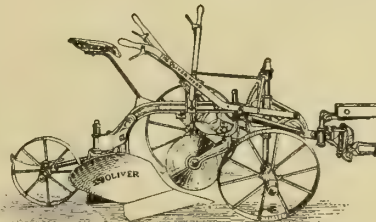
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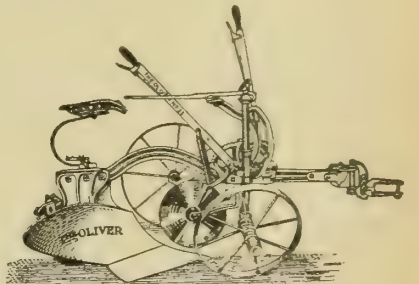


OLIVER NO. 23 "TWO WAY"

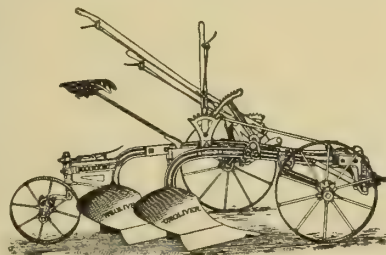
Is the standard by which all others are measured. Turns uniform furrows. Has many advantages over other makes.



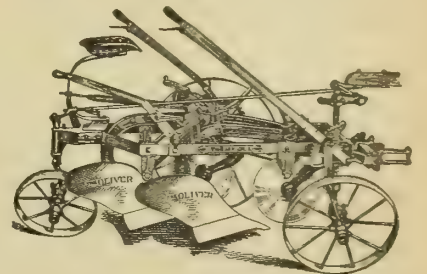
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Oliver No. 1 gang center hitch, high foot lift. No side draft. Ample room for four horses abreast.

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## POULTRY

### FEEDING AND CARE OF

#### BABY CHICKS.

By Arch Egbert, Assistant in Poultry Husbandry U. A. C.

Many types of brooders are used for the care of baby chicks. The brooder whether it be a heated type or a fireless type, should best meet the needs of the little chicks. In the selection of a brooder there are some important things that must be kept in mind in order to obtain the best results.

A brooder must be free from moisture. A damp brooder with a high temperature that is necessary for the rearing of little chicks in an exceptionally good place for disease germs to multiply. Bacteria of all kinds need moisture and with a temperature of from 90 degrees to 100 degrees they will thrive.

In a clean brooder the danger from infectious diseases will be reduced materially. The environment will make the chick happy, vigorous and healthy.

Fresh air is necessary for good health and good substantial growth. If the chicks are put in a brooder deficient in good fresh air they will become dumpish, and, in many cases, they will resort to crowding in an effort to find a good breath of fresh air. They become weak and do not "hustle" around for their food when turned out of the brooder. If the condition is not adjusted, serious trouble may result from diarrhea or other conditions produced through weakness.

It is essential before putting chicks in a brooder to thoroughly cleanse it with some good disinfectant. It is very essential to rid the brooder of bacteria, lice and mites. When disinfecting, special attention should be paid to all cracks and crevices, as those places are where the pests abound.

It is essential that the chicks should not come in contact with draughts when removing them from the incubator to the brooder, or after being placed under the hover. Any slight draught of cold air may produce serious trouble later.

To get the best results from the little chicks they must be happy. This is accomplished by having the brooder warm and comfortable. The temperature under it should be about 100 degrees during the first day or two, then it can gradually be decreased until at the end of a week it is 85 degrees. The temperature outside of the hover should be only warm enough to induce good vigorous exercise.

Just before the chick is hatched the unused portion of the egg is drawn into the body. This contains about 48 per cent of the energy of the egg and is sufficient to supply the chick with nourishment for several days. Due to this natural supply of energy we are able to ship chicks a long distance.

The digestive tract is in no condition to receive food until the yolk is largely absorbed, which takes from thirty-six to forty-eight hours after the chick is hatched. If fed too early it prevents the absorption of the yolk. Soon inflammation sets up and digestive disorders set in which increase the mortality.

Do not feed until 48 to 60 hours after the hatch is completed. The chicks should receive, as their first meal, some good fresh water, a little fine sand, bone meal, and charcoal. The next morning a ration made up of rolled oats with hard boiled eggs and a little bran should be given. This should be fed on a cloth, paper, or board so that all the chicks will have an opportunity to eat this feed and nothing else.

Frequency of feeding is an essential of good practice. This is especially true of artificially brooded chicks which do not have a mother to find their food and keep them interested. The intervals elapsing between feeds should not be longer than two or three hours.

As soon as they have learned to eat or about 2 weeks a grain ration made up of equal parts of cracked wheat, cracked corn and steel cut oats, can be fed in a thin litter of straw to teach them to scratch. At the end of four days a litter composed of

(Continued on page 15)

## Cut the Cost



## Of Ditching

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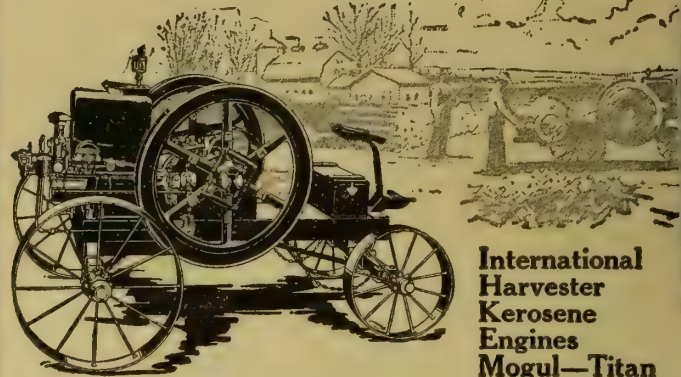
We give you fir lumber fresh from the saw, clear and clean. Guaranteed quality and prompt shipments.

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You know something about **IHC engines**. You have heard of their thorough reliability, the good material and workmanship that goes into them, the ease with which owners get repairs and service when needed, the years they last—and the other points that have sold a quarter million **IHC engines**.

But do you appreciate what real kerosene-burning means—what it saves you in money—how it assures you an unlimited supply of cheap fuel? You need **Mogul or Titan kerosene-burning engine** power to be sure of always having power at a price you can afford.

Ask the **IHC dealer** to show you a **Mogul or Titan engine**—sizes from 1 to 50-H. P. If you prefer to write us, we will tell you where you can see our engines and send you catalogues at the same time. Drop a card to the address below.

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This market place offers our subscribers and readers a very good place to advertise. If you have something to sell or want to buy here is the place to tell it. These advertisements are read because they offer bargains, your bargain should be here. Take advantage of this opportunity today.

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## Gem Herd of Improved Chester White Swine.

This Herd Bred, Raised and Sold. Both Boar and Sow Grand Champions of the World's Fair held at Frisco this last year. Both Sire and Dam, is still in the herd. If such breeding interests you, write for illustrated catalogue. Stock of all ages for sale at all times.

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320-acre well improved ranch, fine 9-room modern brick residence, one 6-room house, one 4-room house, large barn, extra fine springs (would make good summer resort), good water right, independent electric light plant, land adjoining held at \$150 per acre, located one mile from good town in Sanpete county, first-class stock and dairy proposition; all implements and some stock go with place; improvements alone cost over \$20,000. For quick sale only \$25,000—\$7000 cash, balance reasonable, or might take first class real estate at cash value.

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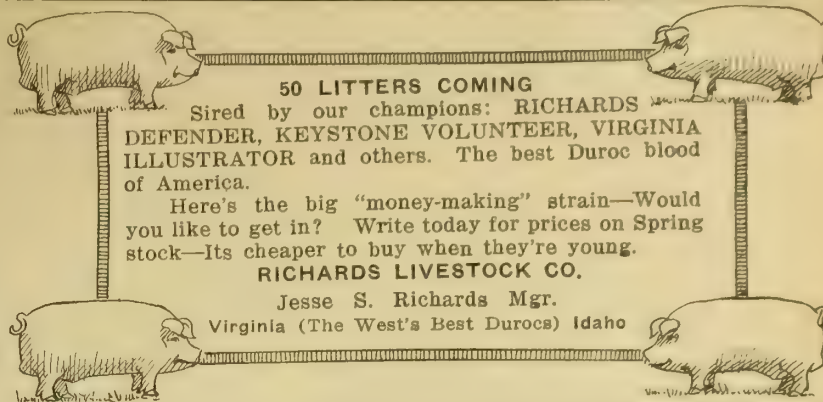
16c lb. in lots of 100 lbs. or more. 16 1-2c in less quantities. Terms cash.

### Alfalfa Chaff Alfalfa Hay

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Our Leghorns are truly worthy of the name. Hardy Laying Paying Strains. We are offering the biggest chick bargain of the season—try us and be convinced. Ask for circular.  
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**50 LITTERS COMING**  
Sired by our champions: **RICHARDS DEFENDER, KEYSTONE VOLUNTEER, VIRGINIA ILLUSTRATOR** and others. The best Duroc blood of America.  
Here's the big "money-making" strain—Would you like to get in? Write today for prices on Spring stock—Its cheaper to buy when they're young.  
**RICHARDS LIVESTOCK CO.**  
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**BABY CHICKS & HATCHING EGGS**  
White Leghorns, Brown Leghorns, Barred Rocks, R. I. Reds, Black Minorcas, Anconas, Buff and White Orphingtons. Prices on application.

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**4—BEST LAYING STRAINS—4**  
Rose Comb Rhode Island Reds and White Wyandottes, Single Comb Black Minorcas and White Leghorns. Egg fertility and stock guaranteed. Write your wants.  
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### FEEDING AND CARE OF BABY CHICKS.

(Continued from page 14)

alfalfa or clover should be supplied and the chicks required to scratch for all their grain. Exercise is essential to good vigorous growth and tones up the body, thus preventing many ills to which the little chicks is subject. For the first two weeks the litter of alfalfa or clover is preferable, for the chicks will pick up many small particles of it and it will do them good. Chopped straws can be used later, and the depth of the litter increased to three or four inches.

Beginning with the sixth day, a mash composed of

bran.....	2 pints
shorts.....	2 pints
cornmeal.....	1 pint
beef scrap.....	2 pints
powdered bonemeal.....	1 pint
charcoal.....	1 pint

may be fed at 10 o'clock in the morning. For the next two weeks the feed should consist of the grain ration fed in the litter in the morning, the mash fed at 10 o'clock, and at night scatter enough grain in the litter so they will get all they want. Gradually as they grow older the mash can be left before them at longer intervals, until at the end of two or three weeks it can be before them all the time.

As soon as possible young chicks should be given outdoor exercise. They should be allowed free range where they can find plenty of green feed. The grain and mash can then be fed in hoppers.

By hopper feeding a great deal of labor and time can be saved. The chicks will get plenty of exercise hunting for bugs and tender shoots of grasses. However, if they must be kept in small enclosures the mash and grain must be hand fed or they will overeat.

The main point in feeding chicks is to supply them with good, wholesome food and to induce them to exercise. Keep the brooder clean and sanitary. Give plenty of grit and fresh clean water. There is no danger in feeding too much green food, providing some grain is given. Charcoal is a good cleansing agent for the digestive tract. Sour skim milk for a drink is a good tonic digestive regulator, and an excellent feed.

## BUTTER WRAPPERS

We carry a large stock of the Best Vegetable Parchment Butter Wrappers and Especially Prepared Ink for Printing the same. We furnish them Postage Prepaid at the following Prices money to accompany order.

100.....	\$ .90
200.....	\$1.25
500.....	\$2.60
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LEHI, UTAH



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**N**EXT to wings, the Oakland makes you most independent of distance and road conditions.

Take the Oakland Six, for instance, at \$795, completely equipped.

Let the snowdrifts come, or the mud get deep. Let your trip

take you across that worst stretch of sand or over that hill that others dread. None of these things will disturb your confidence if your car is an Oakland.

That is why you see as many Oaklands on country roads as you do on city boulevards. It is not only the car of style but the car of service. It does the hardest work easily.

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The Oakland Six with 35 h. p. is more powerful than it sounds.

Oakland engineering and construction gets the power to the rear wheels with the least possible loss. Not a pound of excess weight, but great reserve strength in every part for perfect balance of car and engine.

Built low to the ground for safety and with the usual road clearance.

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All the essentials of a car. Made in 5-passenger Touring and Roadster bodies.

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All one can buy in a car of size and luxury. 7-passenger Touring—room for more.

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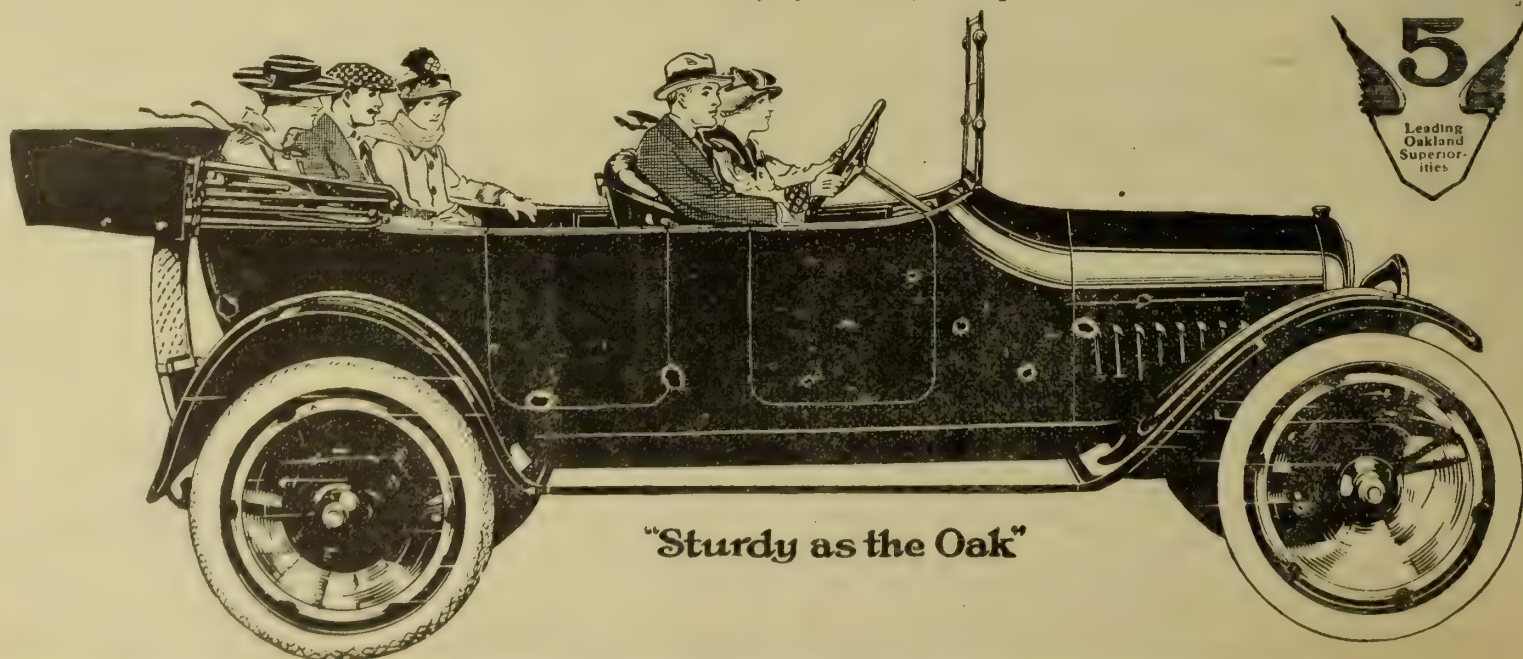
All the extras of Oakland values, with flexibility and economy of the leading high-speed engine. 5 passenger Touring.

Whether you choose an Oakland of six, eight or four cylinder motor, you make an economical purchase from the standpoint of first cost and up-keep expense. Oakland prices are low because of Oakland output, Oakland factory facilities and Oakland buying power.

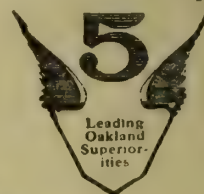
Extra mileage per gallon of gasoline and oil. Extra mileage per dollar for tires. Extra long life with least repairs.

Get an Oakland and have a real car and practice true economy.

The Oakland dealer near you is waiting to prove these things. Let him demonstrate. Write for catalog  
Oakland Motor Company, Pontiac, Michigan



"Sturdy as the Oak"





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Devoted to Agriculture in the Rocky Mountain Region

OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE

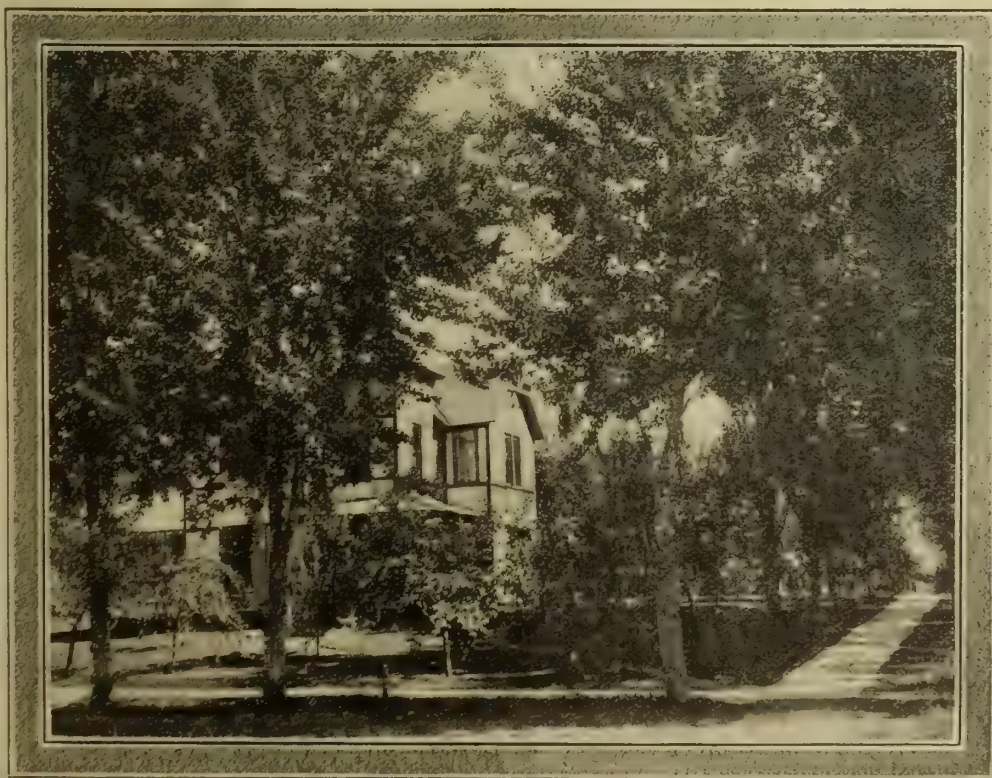
VOLUME XII; No. 37

LEHI AND SALT LAKE CITY, UTAH

APRIL 15, 1916

## Farm Homes

In Utah and Southern Idaho, the great majority of our farmers live in small towns or communities. This practice was established when the pioneers first come to the west. There were two main reasons for this. First, protection, from the Indians, for in the early days there were quite a number of them. Second, for social and religious life, the people wanted to live together. The town was usually the center of a farming area. Living in town the farmer would have to drive a distance to his farm; returning home in the evening.



## The Farmers' Home

Much has been said and done in the past few years for the improvement of the farmer's home. Modern conveniences and ideas are being used in its building or reconstruction. The women are allowed their part of the money to use for labor saving machinery and helps in the home. Music, literature and art are becoming part of the farm home life.





# You Are Not So Far Away

BUT WHAT YOU ARE ABLE TO GET THE BENEFIT OF EXPERT  
MUSICAL INSTRUCTION

## READ THIS

Prof. J. J. McClellan has just published a Home Study course of Piano lessons. This the result of years of his practical teaching experience. Something that gives to you—the student—the benefit of his wonderful instruction. A course of study that is recommended to both students and teachers by competent musical authorities.

The UTAH CONSERVATORY of MUSIC is offering the above piano study as its regular piano course.

If you live away from the city where you cannot attend regular classes you should investigate this at once.

## How to Get Information Regarding the Above

If you cannot call and see us and let us explain, send us your name and address and we will forward you the information by return mail.

Also courses in Organ, Voice, Violin, Dramatic Art and Band Instruction.

Write us today—let us tell you all about it—you will be under no obligation.

## UTAH CONSERVATORY OF MUSIC

TEMPLETON BUILDING

SALT LAKE CITY, UTAH

Just across the street from the Hotel Utah.



# DOLLARS OR DEAD HOGS?

## WORMS! WORMS! WORMS!

Worms are the most deadly enemies of your hogs. All hogs have worms from the time they are a few weeks old. Worms hatch in the stomach sapping the very life blood and vital forces supplied by the food, leaving the animal weakened, a sure and easy prey to disease; worms clogging the intestines, causing fever and indigestion; worms boring through the intestines and working their way into the liver; worms in the lungs, causing irritation, coughing, congestion, jerking in the sides and death, worms wriggling through other parts of the body causing irritation, inflammation, ulcers, decay, pus poison—Death.

When you consider that this trifling outlay will keep you from wasting 20 per cent of your feed in feeding worms and will give your hogs a fine finish in less time, on less feed, you must admit that the money is well spent.

## SEND US YOUR ORDER NOW

—25 lb. SACK ( DELIVERED ) \$ 2.00  
—50 lb. SACK ( DELIVERED ) \$ 3.50.  
SAVE YOUR HOGS.

Hogs and Worms Mean Dead Hogs---  
Hogs and Calko Hog Powders Mean  
Hog Profit In Your Pocket

DO NOT WAIT UNTIL YOUR HOGS ARE SICK TO DOCTOR  
KEEP THEM HEALTHY—GIVE THEM

## CALKO HOG POWDERS

Worms weaken the hog and makes it easy prey for disease. Calko Hog Powders will rid your hogs of the death dealing worms and when fed regularly will keep them free from the pests.

From five to eight pounds of Calko Hog Powders is all a hog needs from the time it is weaned until it is ready for the packing house. About 50c is all it will cost you to make sure that your hog will live and thrive and bring you the highest market price.

Acknowledged highest authorities declare that more Hogs  
are Killed by worms than any other cause.

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VOLUME XII.

LEHI, UTAH, SATURDAY, APRIL 15, 1916

No. 37

## The Business Side of Government

Address at the "Round-Up" of the Utah Agricultural College, Logan, Utah, by Elwood Mead.

The students in this Institution will assume their political responsibilities in one of the most interesting and critical periods of the world's history. It is a time when trained minds and patriotic impulses will be of the utmost value. A knowledge of what government means or can be made to mean in promoting the well being and contentment of the great masses of the people is one of the factors of your equipment as a citizen. I have taken this opportunity, therefore, to call your attention to certain features of the organization and procedure of American state legislatures which perplex political experts from other countries and are a source of anxiety to our own.

In all other directions our thought and achievement have kept pace with the rest of the world. A capacity to do things with skill and directness marks the American. No other people have been quicker to discard out of date machinery or methods, or have shown more ability to devise new ones suited to the purpose. In business we have long abandoned the primitive competition of individuals. Our captains of industry make wider and wider combinations. We were the first to displace the stage coaches with railways, and the post-boy with the telegraph.

On the other hand the organization of our legislatures, the methods of preparing bills, and the control of legislative business have not materially changed in a century. The English Parliament which formed our working model has been radically changed and improved three times. The system of preparing for the work of a Session and controlling the business of Parliament is wholly unlike what it was when we copied it, and the world believes it vastly superior.

In the last half century a dozen new republics have come into existence. None have copied our organization or legislative methods. Nearly all have copied the reformed, parliamentary procedure of Great Britain. The reasons for this are plain. While we stood still, the science of parliamentary government progressed and left us in the rear. We still organize our legislatures like a town meeting. We still elect governors, place them where they can know and do know, better than anyone else, what laws are needed, and then give them no official share in directing legislation.

Neither economy or efficiency are possible under this archaic survival of the pioneer period of law making. In an age when governments are becoming the directing force in the nation-wide co-ordination of industries, we still adhere to that primitive tradition that the Government should not do anything that private enterprise can be induced to carry out.

By turning our railways, telegraphs, telephones, and a host of other public utilities over to corporations, we have given them an immense taxing power and weakened the State until it is dominated by these aggregations of wealth. When legislatures disregarded the popular will, we fashioned the weapons of the referendum and recall as clubs to coerce reluctant or corrupt lawmakers; they have served this purpose but they are not legislative tools and can not be used as such.

The trouble is not so much the government as with our ideas of government. We are still pioneers with frontier conceptions of the State and our obligations. We instinctively object to regulations or the discipline that leads the individual to

subordinate his welfare to that of the community. We are a rich, powerful, but unorganized democracy. It is full of opportunities, but also full of abuses and inequalities, as the Annals of the American Academy of political and social Science for May 1916 puts it. We wallow in opportunity for comfort and riches yet the bread line still stands. \* \* \*

"Here we stand, with reasonable possibilities of 300 or 400 per cent increase in national wealth, but we are not even now fully using our equipment at the low efficiencies that we at present tolerate. \* \* \* We have in our midst the final lunacy of the ages—and industrial depression—unused resources, piles of raw materials lying inert, rows of fully equipped factories with their machines standing silent, and idle, thousands of men and women hungry, poor, half naked, clamoring merely for the chance to work, and at rates that are grossly inadequate. That is the stuff that changes are made of—unwise changes perhaps. To those who can read, there is a hand writing on the wall."

As we have come to realize more clearly our needs and opportunities, a new spirit has been apparent in American politics. There is a growing belief that the methods and policies of our Government should be changed in the direction of larger usefulness and more effective popular control. We are learning that countries that have genuine parliamentary government achieve this result by having at the head some directing, responsible authority, and that we, by making the executive and legislative de-

partments independent of each other, have made definite, prompt and effective action difficult, if not impossible.

We are also learning from other nations that the State can perform some services for the people more economically and effectively than they can possibly be performed by any other means, and that the nations which use the Government as an agent for direct service, like Germany Japan and Australia, derive such benefits from this as to place us, their industrial competitors at a great disadvantage. The old idea of the State is therefore changing to the conception that a Government of any kind is defensible only as an organization for doing things for the common good which can be done better in this way than by the individual.

Australia and New Zealand stand foremost among the nations that have adopted this conception of the State. They are our most instructive examples because they are new countries, occupied by people of the same language, the same political traditions and the same form of government as ours.

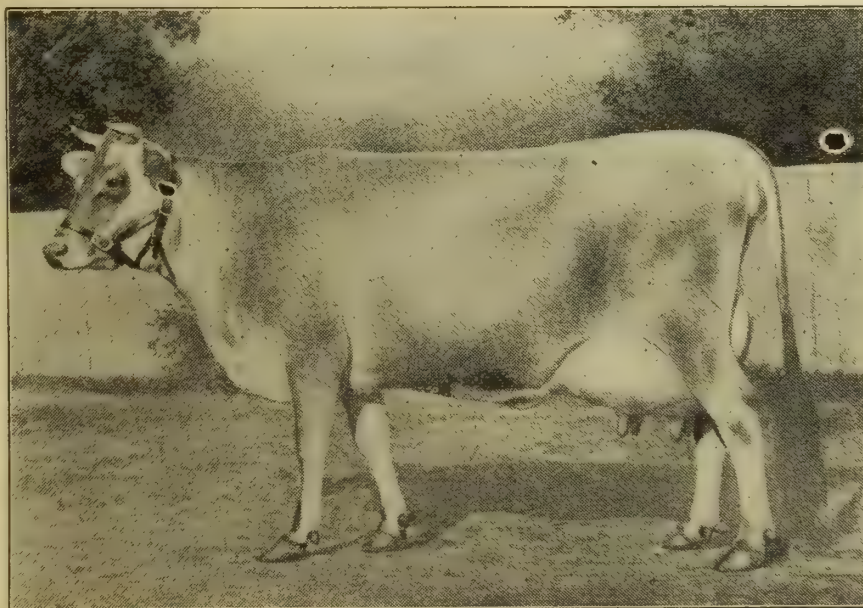
I believe that the Australian policy and spirit will ultimately prevail here, just as we have adopted their ballot and method of registering land titles. I am anxious that you should get a clean-cut, concrete conception of what a government can do as a part of the State's industrial organization, and for that purpose shall describe some of the industrial and social work of the State of Victoria, which holds a position in the Australian federation similar to that of Utah in

that of the United States. Its political activities are about the same as those of Utah. Taxes are collected, schools and courts maintained, crime is punished, and politicians of both parties behave about as they do here. There the resemblance ends, for this Australian State in addition to its political organization is a great industrial and social agent. The State, and by state I include some things done by the federal government, owns and operates the railways; it owns and operates the telegraphs and telephones; it owns and operates nearly all the street car lines and the letter and parcel post. It owns all of the important irrigation works, and a very large number of the water works for supplying cities and towns. Those not operated by the State are operated by the municipalities. There are no privately owned water works. The State also owns and operates some of the coal mines. This is a recent extension of State activities having its origin in the need of placing a check on the prices of the coal monopolies. The State owns many of the wharves and docks of the chief sea ports; it owns and operates ship-building works, and cold storage warehouses (thus placing the small producers of fruit, meat and butter on an equality with the great shippers.) It makes contracts with the steamship lines for the transportation of perishable products to London a distance of 12,000 miles; it inspects all shipments of butter and meat and requires them to conform to certain standards. This is done so that the unscrupulous shipper may not

destroy the market of the reputable one. Under this arrangement butter is shipped 12,000 miles for 1 cent per pound and fresh meat the same distance for 3/4 cents; and the owner of a dozen eggs can transfer them to the Government Cold Storage and get the proceeds of their sale in London. Farmers in Scotland pay more and have less facilities for getting their product into the London markets.

The greatest achievements of the State are not, however, in its industrial undertaking but in its social reforms. Political leaders have not only voiced their desire to have all classes prosper, but have gone to remarkable lengths to make this desire a reality. Mines, factories and transportation enterprises are all inspected and made to conform to regulations carefully drawn to protect the workman from accident or injury to health. There is in all employments compensation for injury and insurance against accident. When men or women become too old to render effective service in the mines of the shops, an Old Age Pension awaits them. The sick are cared for. There are minimum wages for all employees, and the sweated shop girl can count on the immediate attention of the Government whenever abuses of this kind are made known. Those who are idle through no fault of their own are found employment, seeing to it that the man who is willing to work has an opportunity, is as much a part of the State's obligations as it is to protect property or to maintain the peace. In order to preserve their political ideals and be sure that the voters will be capable of self-government, immigration has been restricted to those capable of passing a literacy test and to those of the white race. Believing that they have a great country and a great mission in advancing the world's civilization, they have prepared for defence. Both educational and military training are compulsory. Every boy between 14 and 18 must drill while

(Continued on page 14)



SOPHIE 19TH 169748

Register of Merit test, one year, 17,557 lbs. 12 oz. milk; 1175 lbs. 7 oz. butter. Register of Merit test, five years, 64,005 lbs. 4 oz. milk; 4414 lbs. 14 oz. butter.

Another Jersey cow—Merry Maiden has a Register of Merit test for fat. Her average was 8.13 per cent fat for 365 days. This is the world's highest butter-fat average for a year's record. Her lowest monthly test was 7.13 per cent, made in the sixth month of her test, and the highest was 10.05 per cent, made in the twelfth month. The highest percentage of fat for a single milking was 11.00 per cent.

Merry Maiden started test at four years four months of age, under the supervision of the Maine Agricultural College.



## VICO Automobile OIL



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"EVERY  
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New Idea Only Oiler made without valves, cylinders or wheels. Can't clog, stick, leak or get out of order. Guaranteed 5 years. Use crude or Medicated oil. Kills Lice; keeps pens and yards disinfected. One Oiler cares for 30 to 50 hogs. \$9.25 delivered.

**CALKO HOG POWDERS**  
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**HEALTHY HOGS  
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**CALLISTER-KORTH CO.**  
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Resources over  
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Large loans are easily made by a bank with facilities such as this. We will be glad to discuss your requirements with you.

**Walker Brothers  
Bankers**

SALT LAKE CITY

Founded 1859  
Oldest Intermountain Bank



Mention Utah Farmer when you write.

## The Stallion "Company Plan" Exposed

One of our readers has sent in the following article. Many of these same games have been worked in Utah. When will we learn to profit by the experience of others?

The company plan of selling stallions has been responsible for much of the crooked work connected with draft horses. Its influence has been toward placing the stallion business among the unprofitable classes of business. If each of our readers will appoint himself a vigilance committee of one, we will proceed to stop one method of skinning the farmers.

A smooth salesman usually finds a location where a stallion is needed. He visits among the people in a smooth manner in order to locate an influential man who is willing to help skin his neighbors. This man is usually called the "helper." This helper usually gets from one to five shares in a stallion for making the deal. A stallion worth from \$200 to \$1,000 is usually sold at from \$2,400 to \$5,000. After the salesman has canvassed the territory quietly, and the helper is thoroughly posted, the stallion arrives. Sometimes the helper accompanies the salesman, who takes the stallion out to the prospective purchasers. Sometimes the helper does not appear to be interested, only directing the salesman to those who would be the best prospects. In case it is difficult to complete the sale, another helper may be also donated a part interest in the horse, provided the sale is made. All kinds of verbal statements are made during the sales of such horses. After the sale is completed all the members are required to sign an organization contract, binding them together in a company. Then a guarantee is produced and accepted by the company, after which a promissory joint note is signed. The note reads, "We agree to pay," so that any individual signing the note is responsible for the entire amount. Arrangements are usually made in advance so that the note can be quickly sold to an innocent purchaser. When such a note passes into the hands of an innocent purchaser it can be collected regardless of guarantee or other statements made concerning the sale of the horse. The note is free and separate from any other consideration.

It is interesting to notice how quickly such men leave the country after the note has been disposed of. Then the purchasers realize that they have purchased a stallion at several times its real value, and in case they wish to enforce the guarantee they may not be able to even find the salesman, company or individual who sold the stallion. The great company which represented itself as a "big breeding establishment," in a great many cases owned only one stallion at a time and had no responsibility whatever. If it is decided to purchase a stallion at several times the real value and give a joint note or any other kind of a note, the makers of such notes should protect themselves by requiring the following to be written on the back of the note before it is signed: "THIS NOTE IS GIVEN THIS DATE, SUBJECT TO A GUARANTEE OF EVEN DATE." This will show to any purchaser of

## BIG INCOMES FOR WELL DRILLERS \$2500.00 to \$10,000.00 Per Year Clear

If you want to get into a big paying business of your own and be your own boss, investigate the exceptional opportunity now offered in the Well Drilling Business. Ten times more work to be done than drillers do it! \$50.00 a day clear profit is what many men are doing with

I clear \$50.00 a day above expenses right along. Thos. Kelly



## Armstrong Well Drilling Machinery

We've been building high-grade drilling machinery for other great trouble and work never, give operator an simplicity and durability. And we offer equipment that will drill faster and at a lower cost per foot than any other machinery in existence—machinery that is easiest to operate—that runs quietly—eliminates repair bills—that is always on the job. Our patented Internal Compensating Band Wheel Clutch—a feature that saves all lost motion—is one of the greatest improvements ever found on a drilling machine. Besides saving energy and power, it gives absolute control

over drilling motion. This and our Friction Hoist, another great trouble and work never, give operator an easy right-hand control of entire machine, including raising and lowering the derrick by power. Many other equally striking advantages.

Pay for an Armstrong Drill as it pays for itself on our part cash and time payment plan.

Write Today for our big free catalog. Tells all about Armstrong Drilling Machinery and the Well Drilling Business.

ARMSTRONG MFG. CO.

508 Chestnut Street, Waterloo, Iowa

the note that there are other considerations binding with it. The salesmen will put up all sorts of arguments to prevent the makers having this statement on the back of the note. If the parties selling such a stallion are in good faith and expect to live up to their guarantee they should not object to having that statement on the back of the note.

These company stallions very often are known shy breeders and are purchased at a greatly reduced price from reputable firms. Many of them have crooked pedigrees or certificates from bogus registration associations. It is a smooth plan these salesmen have to fix up a guarantee to fit their crooked game and to also produce the registry certificate after the notes have been signed and sold. Before the horse is purchased a copy of the registry certificate should be sent to the animal husbandry department of the agricultural college of the state in which the sale is made, to be examined by men who are familiar with pedigrees and record associations.

The helper or helpers in making these sales must be watched, as they are instructed to push the deal through quickly without any hitch. Occasionally the helper is skinned by having to sign the joint note. In such a case he must receive in cash anywhere from \$200 to \$1,000. The salesman may realize that with this man's signature on it, a sale of the note can be made quickly at a good price. It might be interesting also to know how much these notes are discounted when they are sold. Many of them are discounted one-third to get the ready cash and get away. It is also interesting to notice the great amount of printed literature that a one-horse stallion company may have, which is another means of appearing to be a large breeding establishment away off in some other state. We believe all reputable firms (even some that have been forced into a cleaner company plan as a result of competition) would be glad to see these methods dispensed with.

It is well to know that a lot of stallions are being sold by the company plan method now. These salesmen are very shrewd men. They quietly ship a horse to one town, lead him across the country to some farmer's barn and sometimes never take him to town so that other live stock men would know what was going on. They seem to be careful who sees this horse. This plainly shows the weakness in live stock judgment by the average farmer. A very inferior horse covered with fat and a

## LOW PRICED LANDS.

Good Dry-Farm Lands with Surface and Artesian Water available at short depths. Close to good thriving Towns and easy access to Railroads. 160 to 640 acre tracts, \$500 to \$15.00 per tract—\$1 to \$9 per acre. I can conscientiously recommend them. They are the best bargains in this State. They must sell quick. Write to

J. W. PAXMAN

Nephi

Utah

## Candy Lovers From All Parts Appreciate Utah Candy

Thousands of tourists who pass through Utah every year, are delighted with the exceptional flavor, smoothness and quality of Utah-made candy.

The reason there's a "something different" about the taste of candies made in Utah, is due to the high quality and absolute purity of the ingredients used, the strict sanitation observed in the factories flooded with sunlight and fresh air, and the skill and cleanliness of Utah candy makers.

There's lots of genuine health-building food in Utah-made candy, because it is made with pure sugar, and sugar is one of the greatest tissue builders. Always buy Utah-made candy—there's none better.

**UTAH-IDAHO SUGAR**  
ABSOLUTELY PURE





## GRAND Introductory Collection 52 PLANTS

THINK OF IT! \$5.00 Worth of  
Plants for \$1.00.

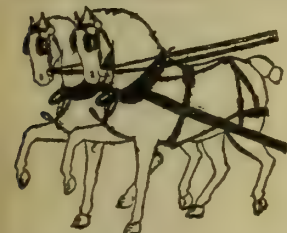
**52 BIG PLANTS  
PREPAID FOR \$1.00**

- |  |                    |
|--|--------------------|
| 6 BURBANK'S SHASTA DAISIES                   | 1 GERMAN IVY       |
| 1 VINCA MAJOR VARIEGATA                      | 1 UMBRELLA PLANT   |
| 1 CUPHEA PLATYCENTRA or Cigar Plant          | 12 ASTERS ASSORTED |
| 1 GERANIUM (General Grant)                   | 12 GIANT PANSIES   |
| 1 ROSE GERANIUM (Grand Duke)                 | 1 SEA MOSS         |
| 1 BEGONIA (Gracilis Linifolia)               |                    |
| 2 SNAPDRAGONS (Firefly)                      |                    |
| 2 TRADENSCANTIA (Tricolor and White Striped) |                    |
| 2 FUSCHIAS (Coral Red and White Queen)       |                    |
| 1 ASPARAGUS SPRENGERI                        |                    |
| 1 MARGUERITE DAISY                           |                    |
| 2 SALVIA                                     |                    |
| 1 DRACENA INDIVISA                           |                    |
| 1 HELIOTROPE                                 |                    |
| 1 AGERATUM                                   |                    |
| 1 ARTILLERY PLANT                            |                    |

**52 BIG PLANTS PREPAID FOR \$1**  
1916 CATALOG FREE.

**Barteldes Seed Co.**  
1335 Sixteenth Street, DENVER, COLORADO

**THE BEST** \$45.00 strictly all oak tanned  
western Double Team  
Harness  
on earth  
with breech-  
ing and col-  
lars for



**\$36**

our new  
Catalog  
sent free

Hame tugs, 1½ inch, with three loops and  
patent buckle. Traces 2½ inches solid  
single ply, with cockeyes.

**THE FRED MUELLER SADDLE &  
HARNESS CO.,**

1413-15-17-19 Larimer St.,  
DENVER, COLO.

## THERE IS NO DIFFERENCE

Great experts agree that  
highly refined beet sugar  
is exactly the same, both  
chemically and diatetical-  
ly, as the fanciest import-  
ed cane sugar. Your pur-  
chase of Table and Pre-  
serving Sugar brings qual-  
ity and also upbuilds an  
industry of the west.

**AMALGAMATED SUGAR CO.**  
OGDEN, UTAH.

**BOURBON RED TURKEY EGGS**  
At rate of 3 for a \$1.00 or 10 for \$3.00.

Order from this ad.  
B. F. ELIASON

Moroni Utah

## ALFALFA AND SWEET CLOVER SEED

Write for samples and prices  
**Sevier Valley Mercantile Co.**  
Salina, Utah.

good coat of hair and plenty of rib-  
bons does look good to the average  
farmer when there are no good ones  
close to use as a comparison. Many  
of these company stallions, which have  
been sold for long prices, would not  
make good geldings.

The company plan has not been  
confined to draft horses, but practical-  
ly all classes of stallions and jacks  
have been sold in this manner. A lot  
of little light horses which have been  
purchased for from \$200 to \$400 have  
been sold for fabulous prices. The  
light breeds most frequently selected  
are the Coach and the Hackney.

The salesmen are shrewd men and  
know how to influence one man at a  
time, both in getting him to sign the  
original contract, which binds him to  
the purchase, and the note. Very fre-  
quently the note is taken around to  
one individual at a time so that his  
signature can be secured, and in the  
event all of the signatures are not  
procured the note can be sold any-  
way.

The breeders of live stock in this  
country are demanding clean men to  
assist in the building up of this great  
industry. Every man in the country  
who is interested in the live stock  
business in any way is requested to be  
on the lookout for company salesmen.  
We consider it a part of his duty to  
keep this article for future reference  
and to show to prospective purchasers  
who are likely to be skinned by the  
company plan. Every citizen should  
be on the lookout for this crooked  
game. Every prospective purchaser  
should be thankful for this infor-  
mation; he ought to be thankful to  
the neighbor who brings it to his  
attention.

## COUNTRY FREE OF FOOT AND MOUTH DISEASE

After a long fight in 22 states and  
269 counties the Secretary of Agri-  
culture has issued an order that on  
March 31 all quarantines and re-  
strictions against the shipment and  
movement of livestock on account of  
foot and mouth disease has been  
removed.

It is expected that all foreign  
governments which have placed em-  
bargoes on American cattle will re-  
move them.

Every precaution will be taken to  
detect and control any cases that  
might occur again. Any suspicious  
cases of sore mouth combined with  
lameness should be reported at once  
to State or Federal officials.

## THE INCUBATOR ROOM

The incubator room must be well  
ventilated if the incubator is to hatch  
strong chicks. Place the machine  
out of drafts and direct sunlight,  
preferably on the floor. A neighbor  
wanted us to tell her what the trouble  
was that her incubator failed to hatch  
fertile eggs. We found the machine  
set on top of another in the kitchen  
corner where there was practically  
no circulation of air. Elevated as  
the machine was, there was little if  
any ventilation, and the chicks could  
not get out of the shells. She brought  
the machine down, moved it from near  
the stove, kept the top of it clear, so  
there was nothing to interfere with  
the regulator, and got a good hatch.

The incubator room should be well  
lighted. The thermometer is read  
several times a day, unless the light  
is good there is danger of error.  
Never use a match to look at the  
thermometer; to get it close enough

to read by means that the heat of  
the match will affect the reading of  
the thermometer. A well ventilated  
cellar, or an unused bedroom with  
even heat, are satisfactory places for  
setting the incubator.

## LOBSTERS, BEWARE.

Some people we know of would  
better keep away from the state of  
Maine.

Twenty million lobsters were  
caught there last year!

# SEED CORN

## For Ensilage

As **GOOD SEED** Corn is scarce there won't be enough to go  
round. P-W's Leaming and Pride of the North produced  
immense crops of Ensilage last year. You can scarcely plant  
a more profitable crop.

Better secure your seed **NOW**.

If our Seed and Nursery Book hasn't reached you, a  
postal will bring you one by return mail.

## PORTER-WALTON CO.

**Seed and Nursery Specialists**

**SALT LAKE**

## Taylor Brothers Snaps

960 acres—all fenced, 450 acres no win wheat,  
125 acres in alfalfa.

This is located in the famous Blue Creek dry  
far section in Box Elder county.

Farm raised 40 bushels of grain to the acre  
last year and this years crop will half pay for it.  
\$30.00 per acre takes it. Terms.

234 acres near Cleveland, Idaho—all fenced.  
44 acres in timothy, 50 acres in alfalfa, 70 acres in  
meadow pasture, 70 acres stubble.

Good ample independent water right for all  
land. Adjoins forest reserve.

Five room house, good barn and outbuildings.

Well stocked with implements.

Near to good schools.

Price \$22,000—¼ cash—balance time. Will take  
some trade as part payment.

These snaps will move fast. Get in touch with  
us **today** regarding them.

## Taylor Brothers

Hotel Utah Building

Salt Lake City, Utah





Combined with the  
Deseret Farmer and Rocky Mountain Farming  
Established 1904

Entered as second-class matter in the postoffice at  
Lehi, Utah.

Published every Saturday by the  
DESERET FARMER PUBLISHING CO.  
LEHI, UTAH.

Subscription price \$1.00 year  
Canadian and Foreign postage 50 cents a year extra.

#### OFFICES

All mail should be addressed to the Utah Farmer  
Lehi, Utah Kirkham Building.  
Our office at Salt Lake City, Utah,  
is at 417 McIntyre Building.



New York Office 5th Ave. Bldg.  
S. E. LEITH, Mgr.

Chicago Office Steger Bldg.  
TOM D. COSTELLO, Mgr.

St. Louis Globe-Dem. Bldg.  
C. A. COUR, Mgr.

**Change in Address**—When ordering a change in the address, subscribers should be sure to give their former as well as their present address, otherwise the address cannot be changed. This is a matter of importance to you and to us.

#### OFFICIAL ORGAN

Utah Horticultural Society, Utah State Dairymen's Association, Utah State Bee Keepers' Association, Bear River Valley Farmers' Protective and Commercial Association, Agricultural College Extension Department and Utah State Fair Association, Utah-Idaho Millers' and Grain Dealers' Association, Utah Fruit Growers Association.

#### OUR GUARANTEE

We guarantee every subscriber against loss thru dishonesty or attempted swindle by any advertiser in this publication. We do not attempt, however, to adjust trifling differences between the subscribers and honest responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within thirty days from date of the transaction, and the subscriber must have mentioned Utah Farmer when writing the advertiser.

**Advertising Rates**—The advertising rates will be sent upon application.

Are you going to increase the number of chickens on your farm this year? There is profit in them if given a reasonable amount of attention.

What are you doing to increase the poultry on your farm? Now is the time to set the hen—also the wooden hen. Raise more chickens, turkeys and ducks. A profitable side line on any farm. A good business to go into if you like to work with chickens. If you do not care to bother with setting a hen or running an incubator, buy some baby chicks and in this way increase the poultry on your farm.

#### UNPROFITABLE ACRES.

We often hear something said about the unprofitable dairy cow, the boarder cow that takes from the profits of the better ones. But what about the low yielding acres? What about the corners and often wide strips of land running all around the farm that never produces anything except weeds?

It may be a strip of poor land running through the farm, is a non-producer because it needs attention, better cultivation or drainage.

Possibly a little time given to the study of conditions and a small outlay would make these worthless or non-producing acres a profit to the owner.

We can not always sell our unprofitable acres like we can dispose of our boarder cows, but we do believe that much improvement could be

made on many of our farms with the "unprofitable acres."

One man the other day remarked "that he believed that many farms have as much as 10 per cent of their land that is unprofitable."

If you want to increase the total income of the farm see to it that there are no waste places or unprofitable acres on your farm.

#### ARBOR DAY

Today—April 15th—is Arbor Day. We believe in planting trees, shrubs, vines and flowers. We heartily recommend to all readers that they observe the day and plant not only one but many trees, flowers, etc., for the beautification and improvement of the farm and home.

Let the children plant a tree for their own future use and pleasure and let the oldest member of the family plant a tree for the children yet to come.

Many a vacant corner, roadside, or lane should be producing some trees for shade and profit. Partake of the spirit of Arbor Day and plant some trees flowers and shrubs.

#### TWO KINDS OF REVENUE.

There are two sources of revenue for a farm paper—from the advertisers and from subscriptions. If the farm papers did not carry a certain amount of advertising their subscription prices would be increased three or four times, making it an impossibility to continue their publication. Further, unless the readers of these farm papers reply to the advertisements or buy the advertised merchandise, there would be no advertising. It is, therefore, to your interest to know that our advertisers are doing something for you. It is also to your interest that you write our advertisers and get their printed matter. Let them know that you see their advertisement in the Utah Farmer.

If you have not been in the habit of looking over the advertising columns in our paper do so now. You will find many things of interest to you. We are very careful what goes into our advertising columns so we can recommend them to you. Go through this issue and see what there is that interests you.

#### "SWAT THE GRADE BULL."

In their efforts to improve the quality of dairy cows in Utah, many dairymen are overlooking one of the most important factors. While much can be done by better care and feeding, the quality of our future herds depends greatly on the quality of the sire used. If he is of better quality than the cows in the herd, an improvement can be looked for in the heifer; if he is not, the reverse is usually the result.

It has been reported that nearly 90 per cent of the dairy sires used in the State of Utah are grades, and it is very unusual for a grade sire to produce daughters better than their dams.

Business men, bankers and creamery men can do much to promote the spirit of improvement among dairymen by calling their attention to this matter. It has been suggested that if this motto, "SWAT THE GRADE BULL," were stamped on all checks issued by the creameries and by the business men, it would call attention to this method, and, if persisted in, would so impress the dairymen that they would heed the advice and get a pure bred bull. Let us all boost for this movement! Who will be the first creamery man to adopt this plan?

#### DR. WIDTSOE'S WEEKLY MESSAGE.

##### CLEAR THINKING

Farming is a complex business. The forces of nature on the one hand must be subdued to make the harvest sure; and the forces of society on the other hand must be used to dispose of the harvest with profit.

The farmer stands alone, a unit in the world of affairs. If put to it, he might subsist and clothe and house himself without outside help, though this is becoming more difficult. At any rate his is a hand to hand struggle with nature to win from the soil the things upon which his family must subsist. He is not a member of a large corporation, with departments and offices in which he is one of thousands unitedly overcoming the same thing and winning victories for a thousand families.

The farmer is the very antithesis of the modern corporation and in the very nature of things it is doubtful if co-operative farming will ever become greatly successful—on the contrary, the genius of the farm seems to demand the one fireside to which the one farm shall contribute full support. The farm is a corporation of the forces of nature under the managerial direction of the owner of the acres upon which the forces are to be applied.

Th man on the farm, therefore, may know the full triumph of individuality; the power of the single will; and into the busy world he may send his boys and girls to give new individual direction to the efforts of the progressing world. However we view it, out of the farm properly conducted, come the big hopes of man.

All this impresses the complexity of the farmer's work. Alone, or nearly so, in contest with physical, biological and social forces, he must win his life's victories. Each farmer is the head of a many chambered corporation which he must hold in successful respect before his fellow men.

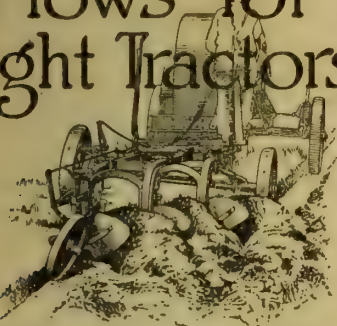
The farmer then must manage his work as all big concerns are managed. The physical labor may be done by machines or beasts of burden or by cheap human laor. The manager must not dull all of his strength by hard physical labor. He must rather gather knowledge and construct plans for the use of the knowledge on the farm. The manager must be a prophet of the future harvest.

The best prophecies are based on clear thinking. To the man who can use facts for desired ends, who can reason safely from facts to important conclusions, who knows the details of his business and unflinchingly makes two and two yield four,—to such men success comes crawling as does the tamed lion. The farmer must learn to think clearly. To simply work all the year and somehow support the wife and children is not good farming nor high living. The work on the farm must be planned with respect to soil, water, markets and other conditions. The things that do not pay must be laid aside; those that seem profitable must be encouraged; ventures, based on sound knowledge, must be made occasionally. The farmer must think more and better; must read and learn more, and become a complete master of the physical labor of the farm. In our day there is no other road to farm success.

Moreover, there is a keen joy of thinking clearly about one's business. By clear thought man is removed from the heaviness of life. We educate our children, not so much that they may gather facts, as that they may be trained to think clearly. By clear thinking the farmer shall be ranked with the professional workers.



# JOHN DEERE Plows for Light Tractors



## High and Level Lift

**PRACTICAL**—the right size for the average farm. Work with any standard tractor. Controlled by the man on the tractor.

Pull the rope and all the bottoms raise high and level. Another pull lets them down.

All bottoms raise high—like a double bail, high lift horse plow. You know from experience what this means. Plows do not clog or gather trash on the turn.

Extra wide and semi-floating front truck means uniform work and even depth of plowing.

Extra beam and bottom, readily attached, increases a regular two-bottom plow to a three bottom or a regular three-bottom plow to a four, as desired.

Famous John Deere Bottoms with Quick Detachable Shares that are taken off and put on in one-fifth the time it takes to change bolted shares. Booklet free.



## "R & V" Engines

### Dependable Farm Power

**"R & V"** Triumph—always develops rated horse power—made in 1, 1½, 2½, 4, 6, 8, 10, 12, 16 and 20 H.P. sizes, stationary and portable.

Easily started; perfect speed control (speed can be varied 40 per cent without stopping engine). Complies with insurance regulations. Hopper cooled—a simple, efficient system that does not require long pipes and numerous fittings. Write for free booklet.



## Van Brunt Single Disc Grain Drills

### with Adjustable Gate Force Feed

**PLANT** any small grain, from alfalfa to bearded oats, corn and peas, even in trash, gumbo or mud. Adjustable gate force feed compels an even, continuous flow through each seed tube.

They are light weight, light draft, well balanced and strong. Frame is rigid; hopper does not sag; the gear drive is positive and the disc bearings are guaranteed to last lifetime of drill. Spring steel scrapers keep discs clean.

**BOOK FREE "BETTER FARM HOW TO USE THEM"** 168 page reference book—tells all about a complete line of implements and how to adjust and use many of them. Worth dollars. Sent free to any one who tells what implements he is interested in. Ask for Package X-160.

**JOHN DEERE, Moline, Ill.**  
**Consolidated Wagon and Machine Co.**  
**Utah and Idaho Agents.**

## Co-operative Marketing

H. Alvah Fitzgerald.

Much has been said of late years on the necessity and value of co-operative marketing of fruit. This idea has materialized at present in the organization of a state wide association for marketing of fruits raised in large enough quantities to justify shipment. Very little however has been attempted by local growers of fruits and vegetables in cooperating to reduce the cost of transportation to market and uniting on uniform methods of selling.

Considering the scattered condition of our State and, in many places, the poor facilities for transportation, this item materially diminishes the net profit of the grower.

A practical test of the possibility of such co-operation and its results were made in the past year. Results are here stated.

An organization was effected by four of the largest fruit growers in a town located eighteen miles from Salt Lake City. Previously each of these growers had marketed their produce separately; had driven to the Salt Lake market during fruit season, side by side, three times a week with small loads, and sold in opposition to each other.

It was found that one wagon and team could transport—with few exceptions—the same amount throughout the season.

During the season of heaviest crops one of the growers was employed to attend to the marketing alone while the other growers alternated in hauling.

A strict system of book-keeping was followed, using one case of berries and a standard apple box as a basis for estimating all expenses. The following conditions and results were obtained.

1. The total market expense of previous years was reduced over one half.

2. By marketing the fruit five days in the week instead of three danger of glutting the market was lessened and a slump in prices avoided.

3. A large trade with leading wholesale and retail dealers was developed due to our ability to fill their orders daily.

4. Prestige on the market was evident as never before.

5. Higher quality of fruit resulted due to the growers ability to personally supervise picking and packing.

6. The above advantages resulted in a marked increase in selling prices over previous years, and also over that of growers unorganized.

The success of the above undertaking must, I believe be predicated on the following conditions:

(a) Honesty and unselfishness on the part of the growers.

(b) A strict system of books wherein every day's business is accurately recorded with guessing and chance eliminated.

(c) A united effort to produce fruits of the highest quality. While our plan is largely local in its application, I believe its fundamental principals can be utilized by growers engaged in similar work and laboring under similar difficulties, to increase materially the net profits of their labors.

# Biggest Event of 1916

will be the  
**DEMONSTRATION TRAIN**  
operated by  
**THE AGRICULTURAL COLLEGES**  
of  
**UTAH AND NEVADA**  
over lines of the  
**SALT LAKE ROUTE**  
in Utah and Nevada

## TEN CARS OF EXHIBITS

Electrically lighted, equipped and operated **The Consolidated Wagon and Machine Co.** of Salt Lake City will have an exhibition of ranch labor-saving equipment, including the famous **John Deere** Plows, Mowers, Harvesters, etc., and latest productions of the **Holt Manufacturing Co.**, including the **Caterpillar Tractor**, which will give practical demonstrations at each station visited.

**THE GENERAL ELECTRIC CO.** of New York, will exhibit a full line of ranch and household appliances of all kinds.

**FAIRBANKS-MORSE CO.** will exhibit electric and gas driven motors, pumps, etc.

**UTAH-IDAHO SUGAR CO.** will have a car of exhibits showing beet sugar processes, etc. Three will be a **GOVERNMENT CAR OF WOOL EXHIBITS** and other general exhibit cars, lecture cars, etc.

Exhibits will also include the highest grade blooded stock, latest designs in ranch buildings, general farm and irrigation equipment and a car devoted to home economies.

**MEETINGS WILL BE HELD** at each point visited, and addressed by experts in everything represented in this train.

## FOLLOWING IS THE SCHEDULE OF THE DEMONSTRATION TRAIN

Salt Lake City, April 7th-8th; Enroute, April 9th; St. Thomas, April 10th-11th; Las Vegas, April 12th; Panaca, April 13th; Modena, April 14th; Lund, April 15th; Enroute, April 16th; Milford, April 17th; Delta, April 18th-19th; Nephi, April 20th; Payson, April 21st; Spanish Fork, April 22nd; Enroute, April 23rd; Provo, April 24th; American Fork, April 25th; Lehi, April 26th; Murray, April 27th; Tooele, April 28th.

A cordial invitation is extended to every person interested to view these exhibits and attend the meetings which will be instructive, interesting and of great benefit to farmers and housewives.

## PRUNING SUGGESTIONS

If your trees require a twenty-foot ladder to gather the fruit, it is time to head back the center of the tree. Head to a fairly large limb that grows to the outside. This facilitates harvesting and spraying.

Where the ends of the lower branches touch the ground, do not cut the entire branch off at the body of the tree unless absolutely neces-

sary. Head the branch back to a smaller branch or twig that is growing upward.

Suckers should be removed, except where they will fill out an open side. Then they should be clipped back severely and be made to bear fruit.

Remove dead and injured branches, and branches that are crossing. This gives the fruiting wood that remains a better chance and results in better and larger fruit.



## Questions and Answers

Utah Farmer:

Have you information on the subject of almond grafting onto peach trees, which applies to the fruit belt near Provo? What are the possibilities of growing almonds commercially on four year old peach trees, and what are methods of grafting such trees?

Answered by Leon D. Batchelor.

Almonds are sometimes budded on peaches in nursery propagation, also peaches have been budded on almonds. Some California almond orchards have been budded to peaches. Thus no inherent difficulties should be encountered in budding over a peach orchard to almonds. One of the most convenient methods would be to cut back the peaches severely at this time of the year, budding the sprouts during August or September. The ordinary shield bud may be used for this purpose. The propagation will be the same as in the nursery row.

The trees should be cut back to the main scaffold limbs, leaving stubs a foot or a foot and one-half long. A number of water sprouts will grow from each of these stubs and if two of these are budded as above, a new almond head will soon be formed on the peaches. Such top worked trees would probably begin to bear about the third year.

The chief difficulty in growing almonds in the Provo district will be the late spring frosts. Almonds blossom earlier than apricots and unless in a very protected district, the entire crop will likely be frequently lost.

Utah Farmer:

Gentlemen:—What is the best food for a milk cow during the winter months and why? What is protein and how much does alfalfa contain?

C. M. J.

Answered by Dr. W. E. Carroll

A milk cow's ration in the winter should imitate the summer feed as nearly as possible. That is it should be palatable, succulent, balanced and supply sufficient food for the cow to do her work upon. Good alfalfa hay fed in about what quantities the cow will clean up well, together with some grain, (if the cow is milking heavy,) and roots or silage makes a good combination. Roots, squash, or silage can be fed up to 30 pounds per cow per day and if the cow is a heavy milker, she should receive one pound of grain daily for each 3 to 5 pounds of milk she produces daily.

Protein is an organic food nutrient, composed of the elements of carbon hydrogen, oxygen, nitrogen, and usually sulphur and very frequently phosphorus and some other mineral elements. It is absolutely essential for the maintenance and growth of all animals. Alfalfa contains from 13 to 16 per cent of crude protein and 100 pounds of alfalfa hay contains from 9 to 12 pounds of digestible protein.

Utah Farmer:

Dear Sir:—Please tell me the feeding value of beet syrup, and how to prepare it for feeding hogs and milk cows?

Answered by Dr. W. E. Carroll.

Beet syrup is fed both to cattle and hogs. For cattle it should be diluted in about 20 to 30 parts of water and sprinkled on the hay. For hogs it can be diluted about the same and used to mix the slop. Care must be exercised in feeding it to all animals



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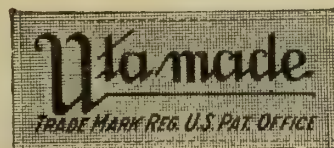
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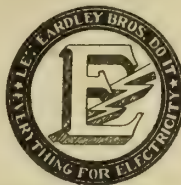
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to avoid the excessive laxative effect  
of the syrup. Three or four pounds  
per day is the most under ordinary  
conditions that can be fed to a cow,  
and one or two pounds to a hog.

Utah Farmer:

Gentlemen:—What is the value of  
mangels as a feed for milk cows and  
hogs.

W. A.

Answered by Dr. W. E. Carroll.

Mangels with good alfalfa hay  
make a very excellent ration for milk  
cows. Depending upon the price of  
mangels they may be fed in quantities  
up to 50 pounds per cow per day to  
good advantage.

Two months old pigs will not thrive  
as they should on alfalfa hay and  
mangels. The stomach of the pig is  
comparatively small, and consequent-  
ly not capable of handling any great  
quantities of coarse rough feeds. Both  
alfalfa hay and mangels are rather  
bulky and it is not possible for the  
hog to consume and digest sufficient  
of these foods for best results. A  
grain allowance of from 2 to 4 pounds  
per day per 100 pounds of live weight  
will be a paying proposition.

Utah Farmer:

I have a heifer that has had one  
calf. She came in heat in due time  
after calving and I was sure she was  
with calf until time for her to be  
showing it. To my surprise she was-  
n't and hasn't showed any signs of  
being in heat since. I have been milk-  
ing her now for two years and am  
very desirous of getting her with  
calf again. She seems perfectly  
healthy and is very hearty. Could you  
tell me through your paper or by  
letter what I could do to bring her  
around. Thanking you for past favors  
I am C. H.

Answered by Dr. W. E. Carroll.

Many dairy cows sooner or later  
cease to breed. This may be brought  
about by a variety of conditions, such  
as some mild disease including con-  
tagious abortion. The ovaries or  
uterus sometimes have been known to  
be attacked by tuberculosis. There  
are many other conditions which bring  
about barrenness. Treatment has  
given very little success in these con-  
ditions so that persistent cases are  
usually fattened for beef.

LAST CHANCE AT

THE OX WARBLE

T. J. Talbert.

It is time to remove the ox warble  
which now appears as humps about  
the size of a pigeon egg under the  
skin on the backs of cattle. If allow-  
ed to remain they leave holes in the  
skin of the animal which reduces its  
selling price and makes the beef near  
the grub slimy and green. The  
butcher does not like this "licked  
beef."

The best treatment is the usual  
method of pressing the grubs out  
through the opening at the top of the  
swelling. A sharp knife and a pair  
of tweezers will often make the work  
easier. The grubs should be crushed  
to prevent their developing into the  
flies which next summer lay the eggs  
that hatch into other grubs. The  
backs of the cattle should be examined  
every two or three weeks.

Oils are sometimes smeared over  
the infested region with fair success  
and cattle that are too wild or too  
numerous to be handled otherwise  
are put through dipping vats. The  
objection to these methods is that  
the wounds do not heal well unless  
the grubs are removed.



## THE HOME

### SUMMARY OF THE TALKS OF MISS ANN BARROWS LOGAN ROUND-UP

"Three dishes well dressed and a welcome withal  
Both pleaseth thy guest and becometh thy hall,  
Good broth with good keeping do much now and then  
Good diet with wisdom best com-forteth men."

The twentieth century housekeeper is learning to place a fair value on her time and strength, and to use new implements when they will save energy.

The cook stove and the consequent hot kitchen have been instruments of torture for generations. We are now beginning to find out that continuous application of heat is not essential for good cooking of food.

The gas stove is not everywhere available. The manufacturers of kerosene and kerosene stoves have not always given good quality in the utensil or the fuel, and thus have defeated the general use of an appliance which at its best does excellent work.

The chafing dish, so often considered a fad, has taught many women how to use alcohol, and they readily adapt themselves to larger alcohol stoves.

Electricity is rapidly coming forward for use in cooking as well as to furnish motive power for kitchen processes. It has many advantages over other means of obtaining heat, wherever its cost is reasonable. Some of the electric ranges have fireless attachments which reduce the cost.

The fireless cooker, though no new thing, has received a wonderful impetus since one of our consuls made a report to our government in 1905, which caused the Commissary General of the War Department to investigate a series of experiments which proved successful in the Army Training School for Cooks, Fort Riley, Kansas.

There is no mystery about this appliance; let an article be well started cooking, and then pack the utensil containing it where it will cool off slowly, the cooking process must continue. The larger the amount of hot material, the more slowly it cools. Close utensils are necessary, and they must be well surrounded by non-conducting material. The principle is the same as when we keep a mass of ice from melting. There is no danger of development of bacteria if the kettle of food is kept at high

temperature long enough to sterilize its contents before packing in the box. This method of cooking is especially well adapted to meats that are not tender, and to the softening of dried fruits and vegetables.

The up-to-date housekeeper should keep beside her cookbook the bulletin No. 28 from the office of Experiment Stations of the U. S. Department of Agriculture on "The chemical composition of American Food Materials." From that she can soon learn to estimate the true value of different foods.

Furthermore, she must know the needs of each member of her household and these vary with age and occupation. Many women are too generous in providing a great variety of dishes at one meal, and thus wear themselves out and do not increase the well being of their family.

Breakfast is an important meal, and often affects the whole day.

The more substantial dishes for breakfasts and luncheons or suppers usually adjust themselves if dinners are well planned. Fruit raw or cooked, cereal or toast, or both, and coffee satisfies many a family today where even ten years ago a more varied breakfast would have been demanded.

This probably is a wise revision to the type of living among the early settlers of our country. Hasty Pudding or bread and milk were the usual foods for breakfast and supper. These were varied with available fruits, berries, in summer and baked apples and pumpkin in winter.

Make the breakfast as simple as possible and then let each member of the household wait upon himself or herself. It is seldom wise to insist upon every one being at the table with the one who must make the earliest start. A tray breakfast is often attractive. In the summertime it can be taken to the piazza or out of doors, or in the winter, if the dining room is chilly, each one filling his own tray may enjoy the warmth of the kitchen range.

Let the small boys learn how to start and control a fire in the wood or coal range, or to regulate the gas burners. Be sure he will find a chance to play with fire if he is not taught how to use it.

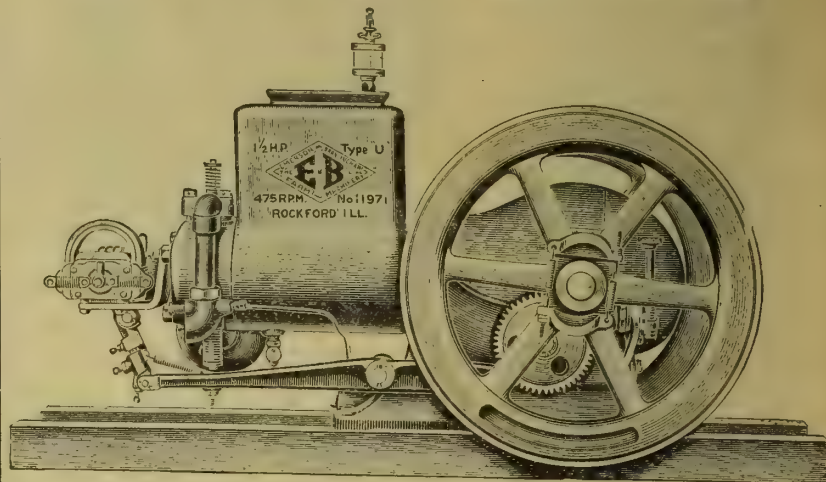
The mother should do her share of the breakfast the night before by starting cereal which requires long cooking and arranging other foods and making out a menu card to lay on the table, telling what is available and where to find it. After eating, if it is not possible for each one to wash his own dishes, at least, they may be scraped, sorted, and pile them at the sink.

Three courses at dinner should serve for ordinary living, and sometimes two. Soup and salad, or soup and dessert, or salad and dessert may accompany the main part of the dinner—the fish or meat and vegetables.

Every housekeeper should have available resources, however simple her scale of living, so that a cheering and warming soup may be introduced if the day be cold and stormy, while the salad should take its place in the warmer weather.

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Tires	Tubes	Tires	Tubes
30x3 in. \$ 8.60	\$2.30	36x4 in. \$17.45	\$4.65
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32x4 in. 15.75	4.20	37x4 1/2 in. 23.60	6.20
34x4 in. 16.70	4.35	37x5 in. 26.30	6.50

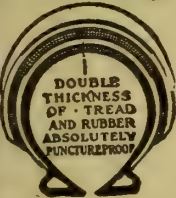
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Terms: Payment with order at above special prices, a 10% discount allowed on orders for two or more tires. All personal checks must be certified.

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Others, less widely known, do nothing but work. That's just what the Nichols-Shepard Oil-Gas Tractor has done and is doing. It has a five-year record of work accomplished. It has no record of failure.

So, if you are interested in an explosive engine, let us tell you about one that you won't have to mortgage the farm to keep going—one that will saw in the winter, plow in the spring, haul in the summer, thresh in the fall, and pick up odd jobs at any kind of power requirement between whiles. We build this kind of an Oil-Gas Tractor and we guarantee it to be a reliable power producer that will work.

**Of Course It's a Red River Special**

If you have never had experience with an oil-gas engine it may help you to know what neighbors of yours say about ours. Send your name and address to us and say that you would like a copy of the Home Edition of the Red River Special paper issued for your vicinity. We will be glad to take the matter up with you and send a Big Catalog that covers our entire line.

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Red River Special Thrashers, Feeders, Wind Stackers  
Steam and Oil-Gas Tractor Engines

(11) BATTLE CREEK, - MICHIGAN

Mention Utah Farmer when you write.

The substantial dinner dish should usually be ample enough to provide something toward luncheon or supper another day. It is rarely wise to serve a cold meat at the meal immediately following the one at which it first appeared. For example, if roast lamb appeared on Tuesday, do not bring it forward again until Thursday then cold sliced lamb will be acceptable for luncheon or supper, while further remnants thoroughly cold will keep for a stew on Saturday, or it can be used for croquettes.

The dining room service for at least one meal in the day when all the family come together should be carefully thought out where there is no maid to wait on the table. There should be a conveniently arranged closet or sideboard, and a small two or three story table at the mother's left hand. By such means a course may be changed with little disturbance.

For a family life it often is wise to keep the table set, and cover it between meals. In other cases it may be simpler to use dollies on the bare tables, most of the time, even for dinner.

Someone has said that a dinner will be more palatable and wholesome when ten cents in money and fifty cents worth of brains are expended, than with the reverse values. Surely the dining table will be better laid and served by the brains of the mistress than by the hands of the maid.

During the spring and summer there should be some change in our food as well as our clothing.

For breakfast, fruit, cereal and cream, either one of the cereals on the market that are ready to eat, or some of the older forms which have been cooked for hours the previous day in a fireless cooker, and then moulded and served cold. To follow this an omelet, toast, and coffee.

At luncheon time cold meat, ham or tongue, or veal loaf, any one of which may be prepared principally in the fireless cooker—with a mixed vegetable salad and fruit as dessert should satisfy anyone.

Dinner may be a more formal meal than the others, but there is no reason for our adherence to the traditional "roasts" as the "piece de resistance." Other dishes will furnish us the needed calories to keep the human machinery running.

Soup may give place to the cooler relishes and fruits during the heated periods. Fish should be used freely and it is now at its best. Rich fish, like salmon or halibut, with the customary sauces, will usually be quite equivalent to meats. Now vegetables are abundant, and should appear in many forms. Salads should be a large part of our dinner, and if accompanied by crackers and cheese are substantial food. As for desserts, now is the time to put aside the hot, heavy, pudding, as we do our winter garments, and use fresh fruit, or the gelatine compounds, or custards and ices.

Hot weather cookery is much like cookery for the other seasons, the difference lies more in the choice of foods less rich in fuel material, and in planning to serve them in natural, simple forms, so that as little cooking as possible will be required.

The piazza breakfast or dinner, and the picnic supper ought to be more general.

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**BUILT-IN MAGNETO**  
**\$35**  
3 H.P. 60 · 6 H.P. 110  
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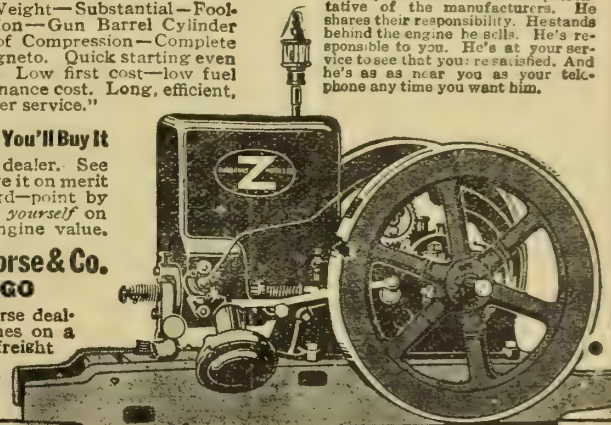
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**Important Dealer Service:**  
When you buy an engine from your dealer you deal with a local representative of the manufacturers. He shares their responsibility. He stands behind the engine he sells. He's responsible to you. He's at your service to see that you're satisfied. And he's as near you as your telephone any time you want him.



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For Seven years the Utah Agricultural College has been breeding a new strain of potatoes on the College farm. They now have a pedigreed potato called Utah Number One. This is a good strain for Utah farmers to try. The Agronomy Department has a few which they will let Utah farmers have in 100 pounds lots for seed purposes only. They are

**RAT CURE**  
TABLETS  
ONLY RATS WILL EAT  
TRY BEFORE YOU PAY  
KILLS 4 RATS FOR 1 CENT  
MORRISITE MFG CO., Dept. F BLOOMFIELD, N. J. U. S. A.

doing this to give as many farmers a chance to try them as possible.



## The Doctor's "Advice" Exposed

Fourth article by the State Dairy and Food Department and State Board of Health.

Dr. Lewis Baker now is writing quite extensively for the newspapers. Judging by the fact one sees "The Doctor's Advice" by Dr. Lewis Baker in most of the dailies one picks up, the "doc." seems to be coming right ahead as a newspaper scribe.

There is only one little hitch to that fake of fakes—Dr. Baker's column. That is the word "advertisement" which always appears at the bottom of what otherwise seems to be a bona fide department of advice to sufferers conducted by the paper itself.

Dr. Baker, as doctors should, has a keen eye. We can tell that from his picture, which is a drawing, not a photograph. That his keen eye is for the money is evidenced by the fact that all his advice—all his "prescriptions"—call for nostrums put out by the company he represents.

For instance: if you are suffering with rheumatism and ask the "doctor" about it he will reply with a prescription, some parts of which are standard remedies; others are proprietary dope. If you read each bit of advice carefully you will note a joker in every one such as "cadomene tablets," "plain yellow minyol," "balworth tablets" and "sulpherb tablets." All those names sound as if the preparations might be

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**25,000 Acres**

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Winter range that can be purchased at an exceptionally low figure.

**640 Acres**

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Also a number of other excellent buys. Look into them today. A postal card will bring you the information.

**WALTER ROMNEY**  
336 So. Main St.  
Salt Lake City, Utah.

standard remedies and yet they are all manufactured by a single corporation—the one that employs Dr. Baker, if there really be such a person.

He of the keen eye (for the money) writes his advice for suffering Utahns in the columns of Salt Lake daily newspapers. Now a genuine physician who would furnish a department or "colym" of medical advice for the benefit of newspaper readers would be paid space rates for his work—so much per column. But this "doctor" gets no space rates. He gives space rates. In other words he pays the papers for permitting him to give his advice. The purpose is obvious.

Let us look at some of his remedies, the formulae of which are held by the Utah State Food Department. We quote from a local newspaper:

Vain asks: "How may I cure my scalp of a very disagreeable itching and scaly condition and at the same time not endanger the growth of my hair?"

Answer: "I would suggest the immediate use of plain yellow minyol to remove dandruff and make the scalp alive and healthy. Three or four treatments will correct your scalp and beautify your hair."

You will not think minyol, though the name of a distinct concoction, is not capitalized as far as the "M" goes. That mere small "M" is a trick to make the reader think Minyol is something staple like sassafras or quinine. Let's see what Minyol is. The analysis gives us this:

Plain Yellow Minyol—Salt, 72.5 per cent; soap, 8.5 per cent; water, 19 per cent.

Chemists estimate the total cost of package of this would be 3 cents. It is sold for about 25 cents.

A profit of 22 cents on a package of "plain yellow minyol," otherwise, salt, soap and water, is pretty good. The minyol, apparently, is more than yellow, it is golden and little wonder that Dr. Baker can afford to pay for having his "advice" published.

"Vain" having cured her scalp with high priced salt and soap and water let us see what "Mary G." wants.

"Mary G." like many of us, is bony and angular and though she eats plenty it does not seem to build her up. So she asks this philanthropic physician about it. He replies:

Answer: The most satisfactory and healthful treatment to increase your weight you will find in the use of three grain hypo-nuclane tablets.

These tablets, when placed in a 3 per cent solution of hydrochloric acid (the natural acid of the stomach), took 96 hours to dissolve. It can be plainly seen that if enough of them were taken in the same day they would increase the weight of the body the weight of the tablets. "Mary G." might then have stomach trouble and in the event, Dr. Baker could prescribe something, no doubt for that. There is no end to the chain.

"Maud" has a bad breath caused from catarrh. "Maud's" breath is so bad that the boys don't like to kiss her, she infers. Dr. Baker prescribes Villane powder. The estimated cost of Villane powder is 2 cents inasmuch as it contains nothing but common salt, 40 per cent; baking soda, 35 per cent, and salicylate of soda, 10 per cent. Nevertheless it can be bought at "any well-stocked drug store" for 50 cents.

Incidentally in this doctor's advice column we come across many suggestions for the use of bona fide

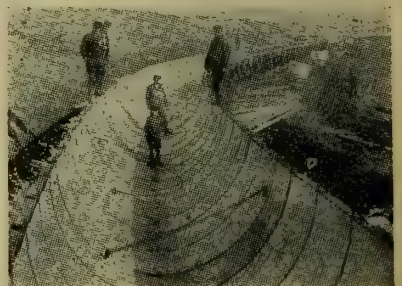
# FIELD PEAS VETCHES

**Make valuable crops---You  
should plant some this  
spring.**

**Our stock is extra fine this season.  
Send for prices today.**

**BAILEY & SONS CO.**  
**RELIABLE SEEDSMEN**  
**SALT LAKE CITY, UTAH**

If you are losing 60% of your water through SEEPAGE, which is the average loss in irrigation ditches, use our LENNON Smooth Flume for Ditch Lining. Instead of building dikes to carry water across your low places, use Flume. It will not leak and will pay for itself the first year, by the water it will save you. Made in all sizes. We sell everything for irrigation.



**UTAH CORRUGATED CULVERT & FLUME CO.**  
Woods Cross, Utah.

## LOOK THIS OVER

**IT IS BEING SACRIFICED TO MOVE FAST.**

A farm of 50 acres that can be purchased at the extremely low figure of \$75.00 per acre.

Located at Elberta, Utah in the heart of a region of known productiveness. Rich, black loamy soil that will raise bumper crops of sugar beets, alfalfa and any amount of garden truck.

On the railroad with a short distance of two of the liveliest mining camps in the West.

First class prior water rights with maintenance of \$1.00 per year when used.

This is the place that should interest the man who wants a high class buy at an exceptionally reasonable price.

It will cost you nothing to investigate this—write today for information before it is gone.

**W. C. ALBERTSON**

Dooly Building

Salt Lake City, Utah



RELIABLE FARM BARGAINS

160 acres of land on the main line of the O. S. L. with free and independent water right coming from mountain streams. Good spring water for domestic purposes. 5-room house, barn, granary and other outbuildings. This is an ideal place for cattle as the range is excellent immediately round it. Just a few miles to Pocatello. If you are looking for a farm and ranch combined, this is an ideal place. \$65.00 per acre on terms.

160 acres first class beet land. 8-room house, good barn, water right from the Bear River Canal. Land that will rent for \$16.00 per acre at ridiculously low price of \$135.00 per acre on terms.

110 acres in the finest possible state of cultivation. No better water right in Utah. \$115.00 per acre, ten years to pay at 6 per cent interest.

2½ acres 15th South and 3rd East. \$1275. Very easy terms.

58 acres good house, barn, other outbuildings. First class water right. Close to a thriving town. \$135.00 on terms.

1 acre 16th South and 9th East. \$500.00 per acre. Terms.

For sale or exchange, stock of drugs and fixtures with lease. One of the best locations in Salt Lake City, on Main Street. The best of reasons for selling. If you are looking for a business, we will let you have this property at a great sacrifice.

We have a few 40 acres left of the Utah-Idaho Sugar Company's land in Bear River Valley that we are selling for 10 per cent down, no payment the second year, one-half payment third and fourth years, balance to be paid in ten years at 6 per cent.

We exchange farms for city property. Plenty of Money to Loan on Northern Utah and Southern Idaho farms.

**KIMBALL AND RICHARDS**  
"Land Merchants"  
56 and 58 Main Street,  
Salt Lake City, Utah.  
Phone—Wasatch 963.



**CALKO DIP**  
An insecticide and disinfectant for  
**Cattle, Sheep, Hogs,  
Horses and Poultry**  
45c qt., 75c half gal.,  
\$1.25 gal., delivered.  
**CALKO**  
**Stock Conditioner**  
Keeps stock healthy  
and thriving.

**CALKO HEALING POWDER** heals  
saddle and collar galls, barb wire  
cuts, etc. Coughs flies flying.  
Send in your order.

**GALLISTER-KORTH CO.**  
McIntyre Bldg., Salt Lake City, Utah



**Big Money**  
in  
**Running Water**

Let us start  
you in a business  
that will make you from  
\$15 to \$50 a day when farm  
work is slack. Other men  
have done it for years with an

**Improved Powers  
Combined Well Boring  
and Drilling Machine**  
Same rig borers through any soil at rate  
of 100 ft. in 10 hours, and drills through  
rock. One team hauls and operates  
machine. Engine power if wanted.  
Easy to operate—no experts needed.  
Small investment; easy terms.  
Make machine pay for itself  
in a few weeks work.  
There is a big demand for wells to  
water stock and for irrigation.  
Write for free illustrated circulars  
showing different styles  
**Lisle Manufacturing Co.**  
Box 978 Clarinda, Iowa

One Man  
One Team

Mention Utah Farmer when you write.

drugs but there is always the patent medicine joker present. Many of the prescriptions he makes are, doubtless, good. The fake lies in the fact that the dupe sufferer must pay the wages of the high-priced advertising man that figures up the copy to deceive him and must also pay for the ad space.

Except to the initiated who have learned to look with suspicion upon a line drawing of a doctor's photograph, this column of Dr. Baker's is deceptive. Most read perhaps two or three squibs of advice and fail to see the "adv." at the column bottom. When they read of five grain arbolene tablets they are reminded of calomel and other tablets put up in three and five grain form. They do not know that arbolene tablets are a proprietary nostrum no bona fide physician would prescribe.

The straight out and out medical advertisements—those that claim all sorts of absurd things for nostrums having little or no therapeutic quality are bad enough. But because these claims are absurd many refuse to be victimized by them. It is the hidden advertisements that the people should be aware of. The man who has something of merit that he wishes to sell is not afraid to come out openly in its favor; neither are some of those who have something not of merit to sell. But watch out for the sneaks—those who hide their advertisements under the guise of a news item and and "advise" the sick to use so and so that has proved excellent in their practice.

The world is full of fakers. Some-one asked Dr. T. B. Beatty, state health commissioner, why he did not show up mining stock fakers and others of that ilk—why the department needs pick on the bogus nostrumites alone. Dr. Beatty says this:

"The mining stock faker takes only your money. The maker of fake medicines—these human vultures—take your money and health at the same time. Any man who will prey upon the natural fear of the sick has a depraved nature. The nostrum fraud is the lowest form of graft."

To paraphrase Shakespeare—he who steals your purse steals trash but he who steals your good health and purse as well is a thief indeed.

Just remember to watch for the jokers in medical advice columns.

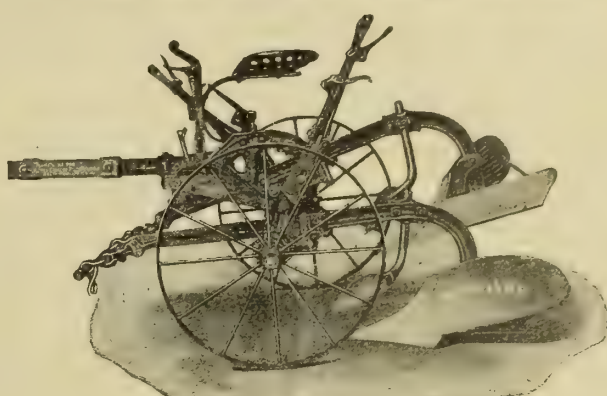
**DIET FOR BROOD SOWS.**

Brood sows generally suffer from overfeeding rather than from underfeeding. An abundance of fat is the worst enemy of the litter. Sows that are to raise pigs this spring should be taken from the rest of the hogs and be fed a different ration. Three rations suggested by the College of Agriculture are: (1) One part high-grade tankage, 12 parts corn; (2) skim-milk or buttermilk and corn, using three parts of the milk to one part of corn; (3) wheat and shorts. Whichever one of these rations is used, a rack containing alfalfa should be so placed that the hogs have free access to the hay at all times. In addition the sows should be supplied with minerals. It is a good plan to dump the wood and coal ashes in the lot where the sows run. A mixture composed of a basket of charcoal or fine coal, 5 pounds of salt, 5 pounds of air-slaked lime, and 2 pounds of sulphur will give good returns if kept easily available.

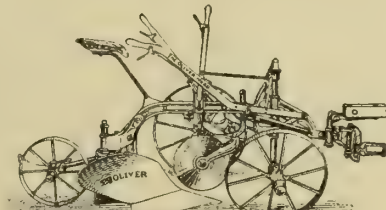
# OLIVER

## The Line of Quality

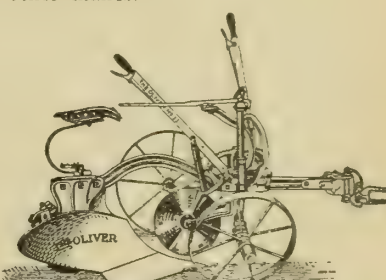
### The Most Skillfully Designed The Most Honestly Made



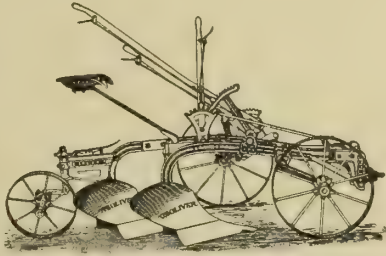
**OLIVER NO. 23 "TWO WAY"**  
Is the standard by which all others are measured. Turns uniform furrows. Has many advantages over other makes.



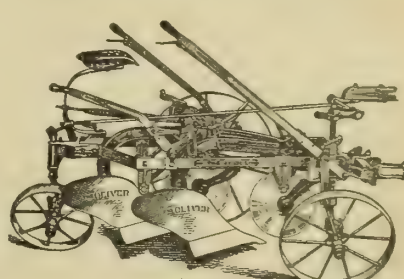
Famous Oliver No. 39 Sulky Acme of perfection, a winner, from the beginning. Too much cannot be said for it.



Oliver No 11 Sulky. Easy to handle. Light and stout. Low in price.



Oliver No. 15 Hi-Tee Gang. A strictly Western plow. Especially adapted to rolling and hilly land. Convertible from two to three base. Simple, strong and reliable.



Oliver No. 1 gang center hitch, high foot lift. No side draft. Ample room for four horses abreast.

**THE OLIVER HAS A RECORD UNPARALLED IN THE HISTORY OF PLOW MAKING.** Your neighbors will tell you to buy the Oliver and take no other. Call on your local dealer or write

## Sidney-Stevens Implement Co.

DISTRIBUTORS

### Ogden, Utah



## THE BUSINESS SIDE

## OF GOVERNMENT

(Continued from page 3)

in school and a part of each year after leaving.

The State holds as a part of its social creed that each generation has an obligation to those who are to follow. The rights to resources on which all depend are therefore retained by the State. No perpetual rights are given to water. The State not only retains ownership of streams but of the beds and a strip of land on either bank from 1 to 3 chains wide. The millionaire and the tramp have equal rights to fish off the same log. Licenses to divert streams for periods from 1 to 15 years are all that are allowed. State forests are reserved in every section; coal measures are leased, not sold; thrift is encouraged by a State Savings Bank, where in addition to the interest paid depositors share in the profit. What it means to wage earners is shown by the fact that out of a population of 1,400,000 more than one half or 735,000 are depositors. The State has a comprehensive, generous and successful system for aiding the poor man in the country to buy a farm and the poor man in the city to pay for his home. Under that system in the State of Victoria 4000 families have been able to secure farms in the country and 6000 workmen their homes in the city who could never have attempted this without state aid and direction.

The next part of this social program is that it has not been handed down from above, like that of socialized Germany, but is the free vote of the people. They have incurred this great responsibility and heavy expense in the belief that there can be no really free society, no genuine democracy so long as want and misery exist in the midst of abundance.

When I first went to Australia I shared the common belief of this country that such paternalism would tend to weaken the self-reliance, the initiative and the independence of the people. But eight years' experience led me to realize that there is a good and a bad paternalism. The paternalism of the soup kitchen is bad, but the maternalism that creates opportunity for industry and thrift, that awakens hope and arouses ambition and strengthens belief in the brotherhood of man, is altogether good both in its influence on character and on the prosperity of the State.

The attitude of the Australian Government is based on the philosophy that the people should be cared for in order that they may work; that they should be given an opportunity to enjoy life in order to love their country and be ready to defend it.

Until recently the outside world has regarded Australia and New Zealand as doubtful humanitarian experiments. Their policies are, however, proving effective commercial weapons. Remote from outside markets, with no accumulated capital, this policy has enabled the people of these two countries to obtain

the highest average per capita incomes of any country in the world. With greater resources and a better position on the world's map, we are being outstripped in the field of agricultural exports and in the rate of increase in agricultural production. A few illustrations of how a State can help farmers in overcoming the vicissitudes of their industry will be better than argument in enabling you to understand why they have reached this position.

Picture to yourself the team work that would be possible if one corporation in Utah owned all the railways, all the water works, all the undeveloped minerals, all the public land, and had the taxes from agriculture and the revenues from these public utilities. Using the railways to increase the land settlement would increase both taxes and railway freights. A rural credit system to increase production would again help swell the tax roll and railway earnings. One hand washing the other, cooperation and monopoly of the highest form.

Put the State in the place of the corporation—the same all around advantages only all the people would share in the benefits. They would get the dividends. Every man who buys a ticket on a state owned railway rides in a car in which he is a part owner. The fish hatchery on a state owned stream provides sport open to every tax payer. It is a great partnership. You have to share it a while to catch the spirit. Last year it had a test which I intend to try to describe. I shall do this by comparing the results from an agricultural calamity in Wyoming and a threatened one in Victoria, Australia. In the first, the State and the agricultural interests stood aloof from each other; in the second, the State and its agricultural interests were, so to speak, mobilized.

Nearly thirty years ago Wyoming was the greatest cattle growing center of the West. This had come about because the State had among its pioneers a body of men of unusual intelligence, industry and thrift. Taking the range country as they found it, men who had started with nothing had, through self-denial and endeavor, built themselves into positions of wealth and influence. No State ever had man for man a more useful or more valuable body of citizens. Then came a winter for which there had been no precedent in severity or the long continuance of storms. The result was that the cattle business was almost wiped out. I saw in the valley of one river the carcasses of a hundred thousand steers; and when Spring came, here were men who, through no fault of their own, had lost the earnings of a lifetime and had to begin over again. Some who had acquaintances or connections elsewhere were able to borrow money and so capitalize their experience and ability, and within a few years reached their former position; but others, their equal in character, equally deserving, because they had not such connections were unable to make a fresh start and ended their lives in the shadow of the disaster. Those were the tragedies of the individual. The State suffered almost equally. It was years before the ranges were restocked, before railway traffic reached its former proportions. Banks and merchants both failed. In all of this gloom and disaster no one regarded it as any part of the duty of the State to come forward either in the interests of the public welfare or that of its worthy individual citizens and aid the men who were best fitted to continue the State's development to do so. Everyone regarded the State as standing entirely aside from this drama of human endeavor. The business of the State was to collect taxes and spend them.

In 1914 I saw a similar catastrophe descend on the State of Victoria in Australia. It came when the State was having to meet the great additional burdens of the war. It was in the form of the worst drought in Australian history. Only four inches of rain fell in eighteen months in the principal wheat growing district. Streams ran dry. Reservoirs were exhausted. For miles and miles there was no vegetation and no water supply. All cultivated crops were a failure. There was no food for livestock. To save them from starvation the farmers' work animals and as far as possible his other stock, had to be moved from the northern part of the State to the narrow humid strip along the sea coast.

Here there was no question as to what was the State's business. It was the industrial partner of all these people and it was its duty to use its resources to the utmost limit to protect them; and it acted with promptness and decision exactly like a business corporation. State

(Continued on page 15)

## SPECIAL

High Grade, Carefully Recleaned  
Alfalfa, Red Clover,  
Alsike Clover,  
White Dutch Clover,  
Sweet Clover,  
Grass and Garden Seeds

SEND FOR BIG CATALOGUE

POULTRY SUPPLIES

Vogeler Seed Co.  
Salt Lake City, Utah

## SALE OF STATE LANDS BURLEY, IDAHO April 22, 1916

The following list of lands will be offered for sale at Burley, Idaho, on Saturday, April 22nd, 1916.

The total area of these lands is 6158 acres, of which 1380 acres are in Minidoka County and 4778 acres in Cassia County. Of the land in Minidoka County 1096 acres are irrigable; the balance is either above water or is taken up by canals, railroads, etc. In Cassia County there are 1558.32 acres Gravity Land and 1978.7 acres of Pump Land.

The price of the land has been fixed at from \$10.00 to \$15.00 per acre, with an average of about \$12. The terms of sale are 10 per cent cash on the day of sale with one year's interest payment; the balance is payable in forty equal annual installments with interest at 6 per cent on deferred payments.

A water-right costs \$42.00 per acre on the Gravity Unit and \$57.50 per acre on the Pumping Unit. A payment of 5 per cent of this amount is required at the time of filing a waterright application, after which there is no further payment for five years. Then there are five annual payments of 5 per cent each and ten payments of 7 per cent each, making the entire amount payable in twenty years without interest. Purchasers are required to reside within fifty miles of their land, at the time of filing water-right application.

The cost of operation and maintenance is based on the amount of water used. In 1915 the charge on the gravity unit was 60c per acre for the first acre-foot and 5c per acre-foot for excess. It has not yet been fixed for 1916. On the pumping unit the price set for 1916 is \$1.00 per acre for the first acre-foot and 40c for each additional acre-foot.

It is generally conceded that the Minidoka Project has one of the best water-rights of any project in the State. Last year, which was the driest ever known the Minidoka Project not only had an abundance of water but was able to sell 150,000 acre-feet.

In general the land in Minidoka County is sandy loam, and that in Cassia County is a clay loam. It is fertile and raises large crops of alfalfa, clover, potatoes, sugar beets, wheat, oats, corn barley, peas, large and small fruits, etc. Dairying and stock raising have proved very profitable.

The project is traversed by the Twin Falls, the North Side and the Oakley branches of the O. S. L. R. R., and by the Salt Lake and Idaho R. R. All of the land lies within one to seven miles of a railroad station, the most of it being within four miles.

There are three thriving towns on the project, all of which are well provided with churches, schools, etc.

For further or more detail information apply to Project Manager Rupert, Idaho.

Ask for Prices  
On This Hay, Alfalfa  
— and Clover  
Fork  
Agents  
Wanted

The National  
Giant  
4-Point  
Hay Fork

The only fork which successfully handles alfalfa, hay, straw, bluegrass, red-top and other short, brittle "slippery" crops.

Takes big bundles without spilling—unloads in less than half time—saves a price in days' work. Don't wait. Send for full information now. Mention your dealer's name. Address

PORTABLE ELEVATOR MFG. CO.,  
888 East Grove Street, Bloomington, Ill.



# THE FARMERS' MARKET PLACE

**For the Buyer**

This market place offers our subscribers and readers a very good place to advertise. If you have something to sell or want to buy here is the place to tell it. These advertisements are read because they offer bargains, your bargain should be here. Take advantage of this opportunity today.

**For the Seller**

## Gem Herd of Improved Chester White Swine.

This Herd Bred, Raised and Sold. Both Boar and Sow Grand Champions of the World's Fair held at Frisco this last year. Both Sire and Dam, is still in the herd. If such breeding interests you, write for illustrated catalogue. Stock of all ages for sale at all times.

Address

**GEO. H. LAWSHE**

**Falls City Idaho**

### FOR SALE

Foundation Stock in Holstein Friesian's and Duroc Jerseys. Will exchange a few for hay or grain. For breeding and particulars write

**JOHN W. STUBBS**

**R. D. No. 2 Provo, Utah.**

### FOR SALE

13 Registered Hereford Bulls, also some females, 9 Registered Angora Buck and several Does, a fine lot of grade calves. I will crate and deliver to any R. R. Station in Utah, 5 weeks old Registered Berkshire pigs for \$15.00 each. Check with order.

**JAMES G. OLSEN**

**Keego Farm Ephraim, Utah**

Large Type Berkshire Boar, Orchard Queen's Chief (206155) sired by Cooper's Harold 2nd (166874) an imported boar from England, his dam was Orchard Queen 2nd (177928) who was 1st prize winner in recent State Fair. He is a good individual with good breeding, great length, and good dished face. He will make a good sire for foundation stock. Registration certificate furnished to purchaser. Also a six month old boar from prize winning stock. Prices reasonable.

**L. P. HARVEY, Pleasant Grove, Utah.**

## CHERRY CREEK DAIRY FARM OFFERS YOUNG BULLS

### FOR SALE

Herd Sires: Rag Apple Korn-dyke 13th, Grand Champion Utah State Fair 1915. Sire Ray Apple Korndyke. Dam Fairview Mabel Korndyke. A. R. O. record as a Jr. 3 year old 25.51, Bt 4.83 fat. Rag Apple Valerie. Sire Rag Apple Korndyke 13th, Dam, Princess Valerie. A. R. O. record 23.00 Bt from A. R. O. Dams.

**NELSON BROS. Props.**

**Richmond Utah**

## BUTTER WRAPPERS

We carry a large stock of the Best Vegetable Parchment Butter Wrappers and Especially Prepared Ink for Printing the same. We furnish them. Postage Prepaid at the following Prices money to accompany order.

100	\$ .90
200	\$ 1.25
500	\$ 2.00
1000	\$ 2.75

Send all orders to  
**THE UTAH FARMER**  
**LEHI, UTAH**

### IF YOU WANT A BARGAIN "SEE ME."

100 acres good land under Strawberry valley irrigating project, only 2 1/2 miles from Payson sugar factory, fine proposition for beets and general farming, only \$7500. Terms or take city property at right figure.

320-acre well improved ranch, fine 9-room modern brick residence, one 6-room house, one 4-room house, large barn, extra fine springs (would make good summer resort), good water right, independent electric light plant, land adjoining held at \$150 per acre, located one mile from good town in Sanpete county, first-class stock and dairy proposition; all implements and some stock go with place; improvements alone cost over \$20,000. For quick sale only \$25,000—\$7000 cash, balance reasonable, or might take first class real estate at cash value.

**GEO. W. DANLEY**

**Was. 2989. 707 Walker Bank Bldg.  
SALT LAKE CITY**

## Money to Loan

On improved farms with primary water rights, at reasonable rates.

**Quick Service.**

**We lend our own funds.**

**INTER-MOUNTAIN LIFE  
INSURANCE CO.**

**Home Office  
11th Floor Boston, Bldg.  
Salt Lake City, Utah.**

**HOUSE AND BARN PLAN BOOK  
FREE—Gives direct from-mill prices on many designs. Send us your carpenter's bill for quick estimate. Western Lumber and Millwork Company, Tacoma, Washington.**

## Alfalfa Seed

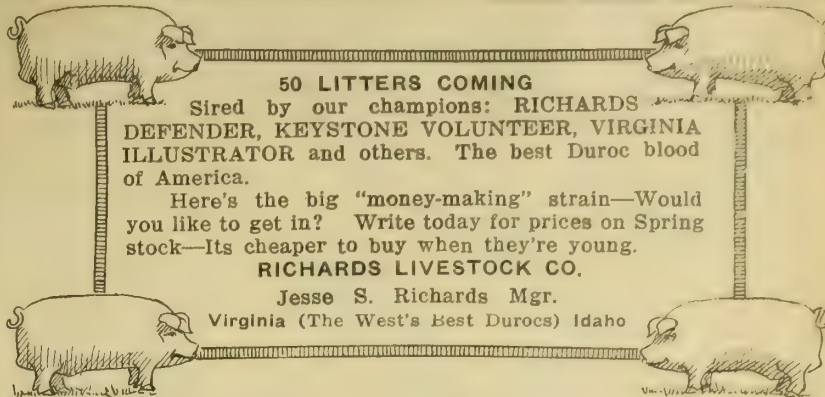
16c lb. in lots of 100 lbs. or more. 16 1-2c in less quantities. Terms cash.

**Alfalfa Chaff  
Alfalfa Hay**

**A. A. HINCKLEY,  
Hinckley, Millard Co., Utah**

### EGG MACHINES.

Our Leghorns are truly worthy of the name. Hardy Laying Paying Strains. We are offering the biggest chick bargain of the season—try us and be convinced. Ask for circular. **MANTI MAMMOTH HATCHERY CO** Mantli, Utah.



**50 LITTERS COMING**  
Sired by our champions: **RICHARDS DEFENDER, KEYSTONE VOLUNTEER, VIRGINIA ILLUSTRATOR** and others. The best Duroc blood of America.  
Here's the big "money-making" strain—Would you like to get in? Write today for prices on Spring stock—Its cheaper to buy when they're young.  
**RICHARDS LIVESTOCK CO.**  
**Jesse S. Richards Mgr.**  
Virginia (The West's Best Durocs) Idaho

**BABY CHICKS & HATCHING EGGS**  
White Leghorns, Brown Leghorns, Barred Rocks, R. I. Reds, Black Minorcas, Anconas, Buff and White Orphingtons. Prices on application.

**THE ORLAND HATCHERY**  
Orland, Glenn Co. California

**4—BEST LAYING STRAINS—4**  
Rose Comb Rhode Island Reds and White Wyandottes, Single Comb Black Minorcas and White Leghorns. Egg fertility and stock guaranteed. Write your wants **E. C. Blanpied, Box 60, Milford Utah.**

### DAY OLD CHICKS

From our own S. C. White Leghorns, selected as layers from stock "bred to lay" for four generations. Eggs for hatching from these and S. C. R. I. Reds. Book orders now. **Bates and Sons, Provo, Utah, R. F. D. No. 1—Box 310. Breeders of Airedale Dogs. Write us.**

### BABY CHICKS

Single Comb White Leghorns. The kind that pay for five or six years. Especially bred for long profitable service. Send for booklet. Early orders insure your wants.

**MOUND VIEW FARM**  
**R. D. No. 2 Brigham, Utah**

**EGGS FOR HATCHING**  
Pure bred Black Minorca and Buff Orpington. Splendid laying strains. \$1.00 for 15; \$5.00 per 100. **Mrs. P. Maher, 633 Seventh Street, Ogden, Utah.**

### FARM FOR RENT

One Mile from Price. 40 acres in alfalfa and 40 acres for other crops. More virgin land for which a reasonable price will be paid for preparing. Man with equipment and good reference can have financial help. With alfalfa hay selling for \$20.00. Seed at 20 cents. Grab this opportunity. Make money.

**321 Kearns Building, Salt Lake City, Utah**

### WE MAKE

**Farm and Ranch Loans  
in Utah, Idaho,  
Wyoming, Oregon and  
Colorado.**

**MILLER & VIELE**

**803-7 Kearns Bldg.  
Salt Lake City.**

## THE BUSINESS SIDE OF GOVERNMENT

(Continued from page 14)

railways moved the starving stock from the dried up wheat farms to the green State forests along the sea coast. State officers made extensive arrangements with the private owners of lands along the sea coast for the pasturage of the surplus animals. But the farmers and the farmers' families had to live, and the State immediately began reproductive works to give them employment. Contracts were let for a half dozen irrigation reservoirs, the plans for which had been made and the construction deferred for emergencies of this kind. Railway work was pushed. Contracts were let for long stretches of State highways which are being constructed in accordance with a comprehensive plan. Every man willing to work was given employment. Millions of dollars were provided to pay for this employment. In this way soup kitchens and the kind of paternalism that destroy independence were eliminated entirely from the program.

In a few months it was time to prepare for the next wheat crop. It was impossible for the farmers unaided to do this. The skies over the whole of the drought-stricken area were still as brass. A large part of this area had only been settled within recent years, and the owners of the land had little or no capital. The supply of hay and grain on the whole continent was nearly exhausted. Alfalfa hay was \$55 a ton at the sea coast and sold for higher prices in the interior. If the Government had held aloof, the next year would have been worse than the present, because no crops would have been planted. It, however, did not hesitate. A conference was called of the merchants in the drought-stricken area, and of the bankers at the capital. With these a committee of the Government met and explained that in all previous droughts the succeeding year had been one of abundance; that they could reasonably anticipate a continuance of that experience. This being the case, the business course was to see that the largest possible area of wheat was planted; not simply to make the acreage equal but to exceed that of any preceding prosperous year, and to insure that result the Government proposed that the State, the bankers and the merchants enter into a partnership to finance the farmers, the State to provide the seed wheat and the feed for the work animals, the storekeepers to provide the food and clothes for the families, and the bankers to provide the money for the storekeepers. Each farmer who entered into this agreement, on the other side of the partnership, was to sign a contract under which a certain proportion of the wheat crop was to be set aside to pay those debts, the State was to charge four per cent interest on the money it advanced, and the bankers and storekeepers six per cent. In this way the farmer was grubstaked and he moved his family and his teams back to the farm. Fifty thousand tons of hay were purchased in San Francisco and shipped on steamers chartered by the Government. The largest acreage of wheat ever sown was put in, and then the rains came, and there was harvested the largest yield ever known.

(Continued in our next issue.)



# Overland

TRADE MARK REG.

35 horsepower

\$ 695

Roadster \$675

*Model 83 B—f. o. b. Toledo*

This is the car which is outselling—virtually two for one—any other car which sells for \$450 or more.

And the principal reason is power.

No other car at anywhere near its price is anywhere near so powerful.

In fact you must pay nearly \$200 more for as much power in any other car.

As a rule, prices vary according to power.

This \$695 Overland is the one big, important, outstanding exception to the rule.

It is priced way below its power class.

All last summer, when this car sold for \$750, we were 20,000 to 40,000 cars behind orders.

No car has yet appeared to dispute supremacy with this one.

And this one has been improved and the price lowered.

Though we trebled our production, the demand kept up all winter and consumed our output.

Another heavy shortage this spring is almost certain.

Order yours now so you won't have to wait.

See the Overland dealer today.

Catalog on request—please address Dept. 650.

**The Willys-Overland Company**  
Toledo, Ohio

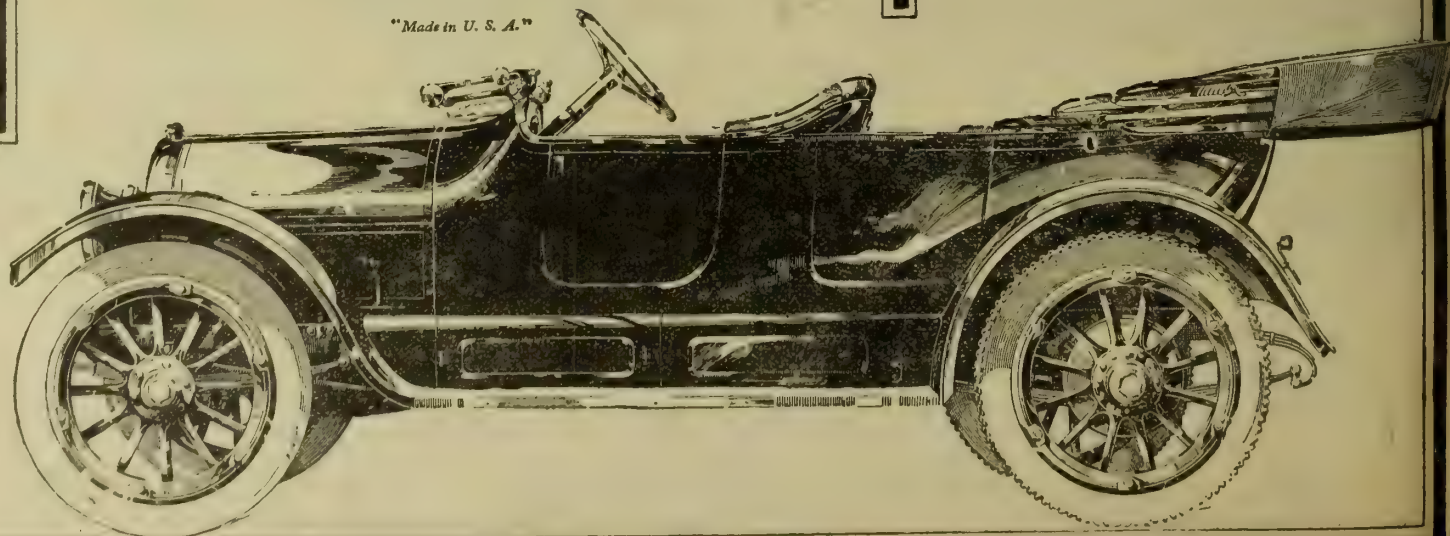
"Made in U. S. A."

No  
such  
power

in any  
other  
car

unless  
you pay

nearly  
\$200  
more





UT

# THE UTAH FARMER

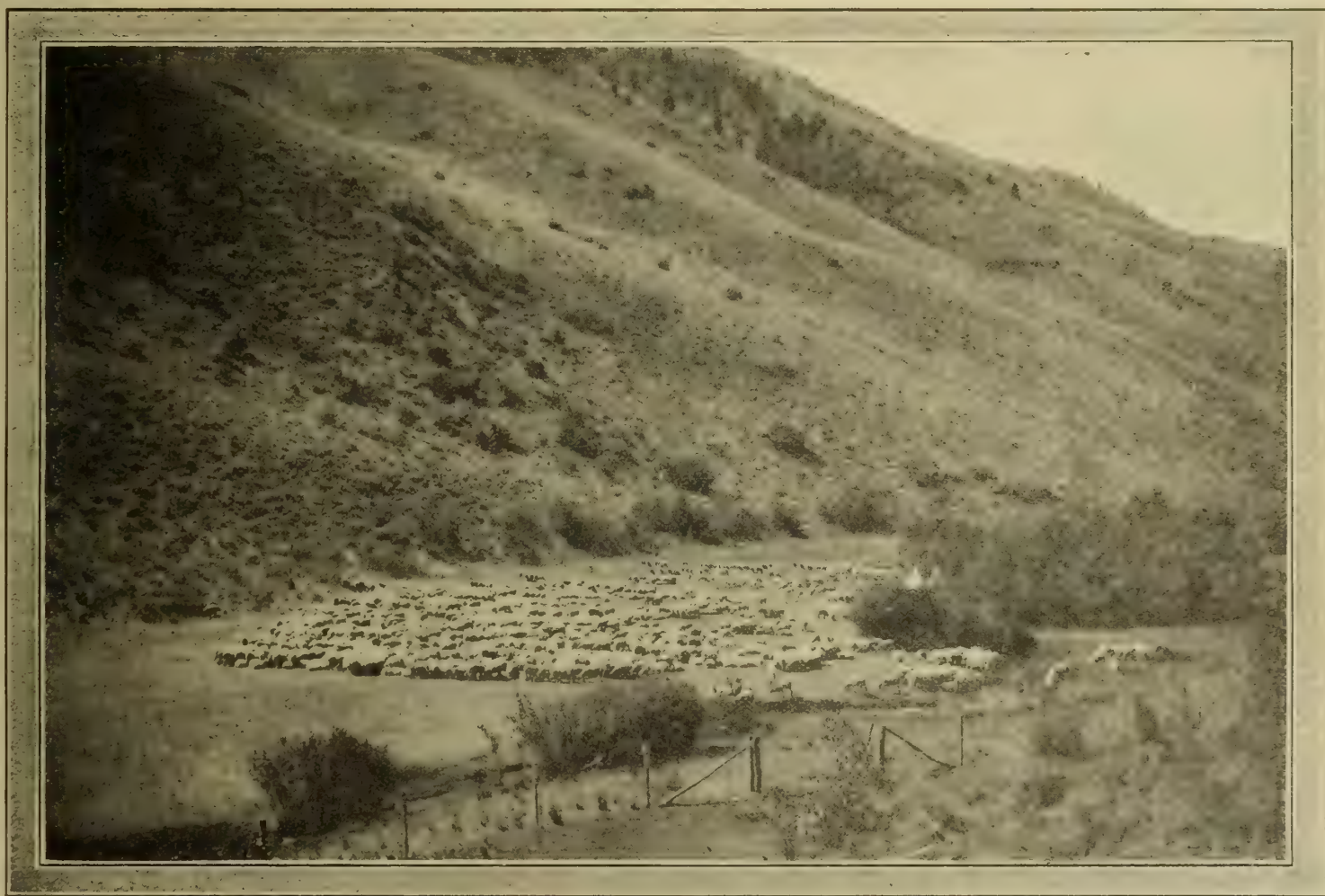
Devoted to Agriculture in the Rocky Mountain Region

OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE

VOLUME XII; No. 38

LEHI AND SALT LAKE CITY, UTAH

APRIL 22, 1916



(Courtesy of the Oregon Short Line Co.)

## Where The Sheep Spend Their Summers

Any one who has ever gone into the mountains in the summer time will remember scenes of this kind

The sheep business is one of the important industries of the State. Our mountain ranges supply food for the summer and in the winter they are fed or "wintered on the desert."



# Study Prof. McClellan's Piano Course BY MAIL



**YOU SHOULD KNOW** of the new method of Piano Instruction just published by Prof. J. J. McClellan.

**YOU CAN LEARN BY MAIL** this course—published expressly for the instruction of those who are unfortunately situated far from the musical centers—is the result

of Prof. McClellan's many years teaching experience.

**GET THE BENEFIT OF PROF. McCLELLAN'S INSTRUCTIONS**—it combines his wonderful ability as a teacher—with the superb mastery he has shown as a performer and gives it all to you in a concise understandable form by mail.

**THIS IS THE REAL—BY MAIL—COURSE**—The one The UTAH CONSERVATORY of MUSIC is offering and teach its students of the Piano. The real by mail course.

**OTHER COURSES FOR THOSE WHO DO NOT CARE TO STUDY PIANO**—practical course in Organ, Voice, Violin, Dramatic Art and Band Instruction all by the best instructors the West can get.

**INVESTIGATE TODAY—IT WILL COST YOU NOTHING.** Without obligation on your part, fill out and send to us the coupon below. You will receive the information you request, by return mail.

## Utah Conservatory of Music

Templeton Building  
Salt Lake City,  
Utah.

### MAIL THIS COUPON

UTAH CONSERVATORY  
OF MUSIC

Templeton Building,  
Salt Lake City, Utah.

Gentlemen—Send free information regarding the course checked. It is understood that I am not obligating myself in any way.

Address \_\_\_\_\_  
Name \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_  
Piano \_\_\_\_\_ Violin \_\_\_\_\_  
Organ \_\_\_\_\_ Dramatic Art \_\_\_\_\_  
Voice \_\_\_\_\_ Band Instruction \_\_\_\_\_

# Biggest Event of 1916

will be the  
**DEMONSTRATION TRAIN**  
operated by  
**THE AGRICULTURAL COLLEGES**  
of  
**UTAH AND NEVADA**  
over lines of the  
**SALT LAKE ROUTE**  
in Utah and Nevada

## TEN CARS OF EXHIBITS

Electrically lighted, equipped and operated The Consolidated Wagon and Machine Co. of Salt Lake City will have an exhibition of ranch labor-saving equipment, including the famous John Deere Plows, Mowers, Harvesters, etc., and latest productions of the Holt Manufacturing Co., including the Caterpillar Tractor, which will give practical demonstrations at each station visited.

**THE GENERAL ELECTRIC CO.** of New York, will exhibit a full line of ranch and household appliances of all kinds.

**FAIRBANKS-MORSE CO.** will exhibit electric and gas driven motors, pumps, etc.

**UTAH-IDAHO SUGAR CO.** will have a car of exhibits showing beet sugar processes, etc. Three will be a **GOVERNMENT CAR OF WOOL EXHIBITS** and other general exhibit cars, lecture cars, etc.

Exhibits will also include the highest grade blooded stock, latest designs in ranch buildings, general farm and irrigation equipment and a car devoted to home economics.

**MEETINGS WILL BE HELD** at each point visited, and addressed by experts in everything represented in this train.

### FOLLOWING IS THE SCHEDULE OF THE DEMONSTRATION TRAIN

Salt Lake City, April 7th-8th; Enroute, April 9th; St. Thomas, April 10th-11th; Las Vegas, April 12th; Panaca, April 13th; Modena, April 14th; Lund, April 15th; Enroute, April 16th; Milford, April 17th; Delta, April 18th-19th; Nephi, April 20th; Payson, April 21st; Spanish Fork, April 22nd; Enroute, April 23rd; Provo, April 24th; American Fork, April 25th; Lehi, April 26th; Murray, April 27th; Tooele, April 28th.

A cordial invitation is extended to every person interested to view these exhibits and attend the meetings which will be instructive, interesting and of great benefit to farmers and housewives.

### A GOOD BUY FOR ONE DOLLAR

Can you think of something that will be more helpful to you than a weekly visit of the Utah Farmer. Brimful of good sound advice, helpful suggestions on every phase of farming and farm life. Our 800 pages of good reading for one dollar. Comes 52 times during the year. **Renew your subscription today.**



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1904.

PUBLISHED

EVERY  
SATURDAY.

VOLUME XII.

# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region

COMBINED WITH THE DESERET FARMER AND ROCKY MOUNTAIN FARMING.

ONE DOLLAR

A YEAR.

FOREIGN

SUBSCRIPTION

\$1.50

LEHI, UTAH, SATURDAY, APRIL 22, 1916

No. 38

## The Business Side of Government

Address at the "Round-Up" of the Utah Agricultural College, Logan, Utah, by Elwood Mead.

(Continued from last week)

Then came a third shadow of disaster. Australia is an island continent, remote from all the rest of the civilized world. The steamers that carry its commerce to Europe and to other lands had practically left those seas. Some had been sunk; some had been interned; some had been seized by the British Government as part of its war equipment. Then the State came forward and bought all the wheat on the continent at 75 cents per bushel certain, and as much more as could be realized after expenses were paid; and on the day its purchase began all private transactions in wheat stopped. Then the Government, as a Government, approached the British Government and sold the wheat to the Empire, and the Empire sent ships to carry it away. The result is that the transaction is now closed. The Australian farmer has received, or will receive, over a dollar a bushel for his wheat. In one year the disaster of the preceding year has been wiped out; the Government, the storekeeper and the bankers have been; or will be reimbursed. The State is again prosperous.

What in Wyoming meant State depression and the tragedy of life for some of its best citizens, has been averted in Victoria by the most effective forms of co-operation that can be devised.

I leave it to you to determine which is the most valuable kind of Government and which is the truest form of Democracy, that in which the State becomes a partner in the everyday drama of human getting, or stands aloof from it.

Why the State did this was explained by the Minister of Agriculture:

"The reason why the Governments have stepped in is to save the farmers and the community generally from disaster. The circumstances not only justify the Government's action, but imperatively demand it. These are no ordinary times. The greatest war the world has ever seen is raging.

"The Empire is fighting for its life and so are we. The war dominates everything—its effects are far reaching, extraordinary, unexpected. The Federal and State Governments have interfered—not to prevent the farmer getting the benefit of high prices, but to save him from ruin and the country from chaos and disaster. The effects of the war manifest themselves in most unexpected ways. The war is the cause of the wheat problem. It is also the cause of high prices. If there were no war, farmers would have no difficulty in marketing their products in the usual way. But if there were no war, prices would be much lower. The war, which has made the Australian farmers' wheat much more valuable abroad, has also made the task of marketing the crop extremely difficult and costly. The farmer looks upon paddocks of waving wheat, ripening in the sun, stretching as far as the eye can see. It is a sight to fill the heart of a man with great gladness, but it does not complete the picture. Before this bounteous harvest can be turned into money it must be transported to the markets of the world."

"But for the Government's scheme at the end of January, nine bushels out of every ten would have found no buyers; by the end of February not one bushel out of four could be sold; even by the end of May—if freight comes in as freely as for January, a most improbable event—not one half the harvest could have found buyers. So that at the end of six months from now, if the Government had not stepped in, half the crops would have been unsold. The local market would have been demoralized, the benefits of high prices lost, the cash advances of 75c impossible."

Government services like this embody the spirit of a real Democracy the spirit of service.

The question is frequently asked, "Can an American State aid its people as the Australian Government does; My answer is that it cannot until we change our methods of preparing bills and enacting laws. Our state governments lack two features that are essential to efficiency. The first is a central definite authority to determine what laws are needed, to see that these laws are properly prepared, and having such control of the legislature as will insure their enactment. Our legislatures have no directing mind. The Governor, who has the most knowledge of the State's needs, who ought to shape the legislative program, has no voice except to object. His power to obstruct is more absolute than that of the Czar. Instead of this he ought to be the Chief Constructing Agent. Instead, as one magazine recently put it, the Lower House may hold that cherries are ripe; the Upper House that they are green, and the Governor that there are no cherries at all. There can be neither unity nor effective action until this is changed. And the State cannot operate railways or be an effective instrument for social betterment until it can act with the same directness as a corporation.

If a legislature is to act with the efficiency of a corporation, it must be organized like a corporation, and the first step towards this is to change our decentralized, irresponsible committee method of preparing bills into the organized control of a responsible body. If we retain political parties, then the majority party should take the directing hand in legislation, and should have within itself ability to prepare for its duties and perform those duties in the full light of the public. We can never have good laws so long as bills are either incubated by interests outside the Government, as many now are, and introduced by members who do not understand their meaning. We can never have good laws until there is some limitation on the number of bills introduced. The spectacle of 6,000 bills introduced at one session of the California legislature and 9,000 bills introduced in the first month of Congress, is simply a shocking example of bad management and waste of time and effort that must inevitably lead to a confusion and muddle in legislation, to an unsettling of business and to crowding our courts. We do not get the aid that human welfare and business enterprises need, but we do get uncertainty, expense and inefficiency.

We cannot have good Government until the administrative authorities have a share in the preparation of laws. The Governor of the majority party ought to be official leader of the party, or the character of his functions should be entirely changed and an official leader chosen, as is now chosen by Governments that have adopted the British Parliamentary form. As it is now, the declaration of members of the legislature and the message of a State Governor means nothing, because neither has power to make these declarations effective. On the other hand, the statement of a Parliamentary leader in a country like Great Britain, or any other Democracy where Government is efficient, means and must mean what it says, because it is a responsible utterance and the party making it is held accountable. He must either carry out his promises or resign. The organization and procedure of the Australian Government is copied after that of Great Britain. The party that is in power and hence has the power to pass bills, has an official leader, called the Premier, and that leader has seven

or eight associates who, with him constitute the Ministry. These eight members are the Executive Committee of the State legislature.

The Premier assumes all the functions of our State Governor, with the added power of being the leader of his party in the legislature. Each of the seven selected associates assumes the duties here performed by the elected State officials. One becomes Attorney General, another Minister of Education, another Minister of Agriculture, etc. Sometimes one of the members will assume control of two departments, the Minister of Agriculture being also Minister of Water Supply, and the Minister of Railways having also charge of Forests and Mines. In their administration of the governmental department these men learn, as cannot be learned elsewhere, the needs of the State. Deputations from all over the State come before them to present requests for legislation needed by the farmers, fruit growers, miners and other interests. It is the duty of these eight men to prepare the bills that are to be submitted to Parliament as government measures, and this cuts off the silent, unofficial law makers who prepare so many of the bills in our states. Knowing this, those interested in legislation present to them, as responsible authorities, the arguments in favor of or against the measures desired. In this way the Government has the benefit of the advice and suggestions of wage earners on one hand, and the best business ability on the other.

In the framing of the bills the Ministry has first of all at its service all of the continuing State officers, the heads of all departments, the professors of the Universities, and in addition, a salaried officer known as the Parliamentary Draughtsman, whose business it is to put measures into proper legal form and indicate all of the existing laws that the one proposed would supersede or modify. When the legislature meets there is a statement of the bills that are to be introduced as party measures, and which the Government expects to pass. It is rarely that there are more than 20 of such bills.

In the legislature Government measures have the right of way. Private members can introduce bills, but they can only be considered one day in each week, except on the consent of the Premier or whoever of the dominant party is in charge of Government business. The chances of a private bill passing are therefore so small that very few are introduced, and it is rare that 100 bills are introduced in a single session.

The most important measure introduced at any session of Parliament is the Budget. In this the people learn how the great reproductive enterprises like railways and water works have fared, how much they earn; how much they spend. The Budget is a great agent for efficiency and popular control. It ensures an opening of the books and free discussion of methods and policies. It must be shown what taxes are to be levied, and what these taxes will produce, and a full explanation of how nearly the estimates of the preceding Budget have been justified by events. This full publicity in governmental matters is something that the democracy of America has yet to enjoy.

A business government often has to deal with emergencies like the drought in Australia, or the recent floods in this country. This renders it desirable that someone should act for the legislature between the sessions. In the Australian State where I lived there was usually a vote of \$1,500,000 for the Cabinet to use for matters not covered in appropriation bills should it be needed before the next

session. Such a provision is essential in a Government carrying on large business undertakings, and it would be exceedingly valuable here as well.

A Cabinet that directs the operations of railways, telegraphs, telephones, water works and a score of other industrial and social undertakings, in addition to attending to political affairs, assumes great responsibilities. The opportunities to display executive ability and to do good to their fellow men are so great as to render these positions most attractive to able and patriotic men. The honor of a legislative position outranks all others. In the schools and in the Universities the bills before Parliament are debated by the young men, who begin thus early their training for these positions.

We must change our views as to the honor of the public service and ensure life positions to faithful and able men, before there can be continuity of policy and efficient management of industrial or social enterprises, and the State must do these things if we are to keep pace with nations like Denmark, Germany and Australia. Competing countries are being forced to follow their example. Mr. Lloyd George says that the war has revolutionized the industries of England by bringing about the organization of the empire as a unified whole, and that this fact alone will in the end pay their debts by the increased efficiency it ensures.

A number of plans have been proposed for reforming our legislative weaknesses. The Governor of Kansas suggests a law-making body of sixteen men which would resemble the Commission form of government for cities. A smaller number of law makers is certainly desirable. The members are now in each other's way. They add to the cost and detract from the result.

In any event the subject must soon cease to be one of philosophical speculation. This war will leave Europe industrially organized and highly efficient. Everywhere this organization will include the Government. Competition and the perpetuation of real Democracy will force us to use the Government as an indispensable factor in our future economic progress.



The boys and girls club work is doing much to interest our young people with farm life. Give them some responsibility—an opportunity to make a little spending money.



## DAIRYING

### PROFITS FROM FEEDING SILAGE— DIRECT AND INDIRECT.

Dairymen do not always consider the indirect profits of certain feeds because they look for immediate results at the milk pail. The figures below indicate that silage plays an important part in keeping up the milk flow which would, without this succu-

ent feed, continue to decrease.

Forty cows from a herd of 71 were selected for this test. These cows had freshened prior to September 1st, and all continued in full flow of milk through September, October and November. These forty cows included all in the herd that did not freshen or go dry during the three months.

	Lbs. Milk	Lbs. Fat
September (Pasture, hay in rack, and grain) .....	28,241	929.8
October (Pasture, hay in rack, and grain) .....	25,518	843.1
November (Hay and ensilage) .....	29,028	925.2
(Note For October the average of 30 days is given.)		
Decrease, September to October .....	2,723	86.7
Assuming like decrease, October to November .....	2,723	86.7
Total decrease without silage would have been .....	5,446	173.4
November yield with silage was .....	29,028	925.2
Without silage would have been .....	22,795	756.4
Total decrease without silage would have been .....	6,233	168.8
Value of increased butterfat at 27.5c .....		\$46.42
Value of skim milk 25c per hundred .....		15.58
Total value of increased products .....		\$62.00
Tons ensilage fed per month .....	18	
Increase for each ton fed .....		\$3.44
Each ton of ensilage fed replaced		
320 pounds grain, valued at \$1 per hundred .....		3.30
660 pounds hay, valued at \$5 per ton .....		1.65
Value of ton of ensilage .....		\$8.39

### PREVENTING MOTTLED BUTTER

Mottled butter is frequently found on the market at this time of the year, and, even though it may be of very good flavor, it is strongly discriminated against by the purchaser. As this defect is one of workmanship, it can be overcome by the application of proper methods on the part of the buttermaker.

Mottles are caused primarily by an uneven distribution of salt in the butter. This may be produced by insufficient working of the butter or by churning, washing, and working it at a very low temperature, or by washing, and working it at a very low temperature several degrees higher or lower than the churning temperature.

When the quantity of butter made in one churning is much less than usual, it is necessary to work it a greater number of revolutions of the churn than usual in order to produce the same results on the butter.

Extremely low temperatures of churning, washing, and working should be avoided, because they produce so firm a butter that it is only with great difficulty that the salt can be worked uniformly into it. High temperatures of churning, washing, and working must also be avoided to prevent an abnormal loss of fat in the buttermilk and also the making of a greasy, leaky butter.

Great variations in temperature during the manufacturing process should always be avoided. Under normal conditions the temperature of the wash water should be the same as, or within 2 degrees of, that of the buttermilk.

When the churn room is so cold that the butter becomes chilled before working is completed, mottled butter is frequently the result. To prevent this it is preferable to increase the amount of working rather than to raise the temperature of the wash water.

Mottled butter, then, may be prevented by using methods that will insure a uniform distribution of salt.

### CREAM CHEESES. W. R. Gilbert, Canada.

The production of cream cheese is one of the most profitable departments of the dairy, its manufacture being more remunerative than butter-making and certainly entailing very little extra trouble. These cheeses are most nutritious as they contain 50 to 60 per cent, of fat.

There are two varieties of cream cheese: (1) Double cream cheese, and (2) renneted cream cheese. For the former, thick cream of a rich or solid consistency is used, that obtained from shallow pan setting being most suitable; whereas for the latter the cream should be thin. The renneted variety has the better keep-

Clean Skimming  
Easy Turning  
Easy Washing  
Small Repair Cost  
Best Cream Quality  
World's Highest  
Awards



## DE LAVAL Stands On Its Record

FOR nearly forty years the De Laval Cream Separator has led in the cream separator field. It was the pioneer in 1878. It had a long start and has always held its lead. It has always led in every step of cream separator development and popularity, and more De Laval are in use today than all other makes combined.

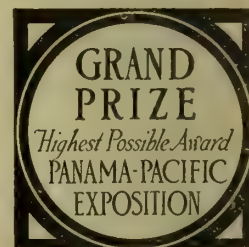
It has always been recognized as the closest skimming cream separator. That's the main reason why 98% of the world's creameries use it to the exclusion of all others.

Because of its cleaner skimming, ease of operation and wonderful durability, every De Laval user is a "booster" and the better its work is known in a neighborhood the more popular it becomes.

The better quality of cream it produces is attested by the fact that De Laval produced cream and butter have scored highest at every annual contest of the National Buttermakers' Association for twenty-four years and in every great representative contest for over thirty years. Last but not least, the De Laval was awarded the Grand Prize at the San Francisco Exposition in 1915 as at every other great exposition since its invention.

The creamerymen's choice can't be far wrong. The world's greatest dairymen and mechanical experts who act as judges at the great expositions can be depended upon to recognize real merit, and the fact that the De Laval is the choice of the majority of all cream separator buyers must mean a good deal to you. In your purchase of a cream separator can you afford to ignore these considerations?

Let the De Laval start saving cream for you right now. See the nearest De Laval agent at once, or if you do not know him write us direct for any desired information.



### THE DE LAVAL SEPARATOR CO.

165 Broadway, New York 29 E. Madison St., Chicago  
50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER

Resources over  
\$6,500,000.

Large loans are easily made by a bank with facilities such as this. We will be glad to discuss your requirements with you.

Walker Brothers  
Bankers

SALT LAKE CITY

Founded 1859  
Oldest Intermountain Bank



qualities but the double cream appears to be the more general favorite.

### Double Cream Cheese.

Wrap the thick cream in a fine textured linen cloth, secure the four ends and suspend the whole in a convenient place where ventilation is good, and the current of air continual. In order to secure a uniform and even drainage, the cloth should never contain more than a quart of cream. If this quantity is exceeded acidity will arise too quickly on account of the uneven drainage which takes place. The process of drainage generally occupies a period of two or three days and during this time the cloths should be opened at intervals when it is seen that outside surface has hardened and the sides should be scrapped down with a knife. The whole of the contents should then be thoroughly mixed together and further to accelerate this

process the cloths should be changed as often as possible. After a sufficient lapse of time the curd will be found to be in the requisite state for molding, and at this stage it should be turned into a basin and intermixed with a little finely ground salt. This will preserve the cheese for a longer period and will serve to bring out the flavor.

### Renneted Cream Cheese,

The process of manufacturing renneted cream cheese is practically similar to that of the double cream, the only material difference being in the addition of the rennet, and the substance of the cream. The latter should be thin as obtained from the separator, and two or three drops of rennet are added to each pint of cream. An even temperature of 65 degrees F. is most suitable. The rennet must be thoroughly well stirred into the cream, whereby the escape



the whey will be facilitated and the whole process of drainage greatly assisted. In order to save time

some makers, exert pressure upon the curd by means of a weight or board, in order to squeeze out the whey and so complete drainage in a very short time. When neatly and daintily made up these varieties of soft cheese command a ready market. Preservatives should not be used as the process of drainage is checked.

#### QUESTION AND ANSWER.

Utah Farmer.

Dear Sir:—Will you please explain cause of the following:

For the past two years we have made a practice of testing our cows with a Babcock Tester. But of late, we are having difficulty in getting a correct reading from the fact that some of the samples show a dirty substance, just below a very narrow margin or reading of fat in the glass tubes. While other samples taken from different cows show the fat clear and no dirty substances below.

Very Respectfully,  
A subscriber.

Answered by Dr. W. E. Carroll.

Trouble with a clear fat column in making the Babcock test is usually due to acid of the wrong strength. Acid either too weak or too strong sometimes gives a charred appearance to the column which sometimes makes very difficult. The acid should be decided with the hydrometer, and should have a specific gravity of 1.82. Acid should be kept tightly corked in glass stocker bottles as it very readily takes up water from the atmosphere. If the acid is the right strength and the details of the test carried out accurately, no further difficulty should be experienced in making the readings.

## VICO Automobile OIL



WHAT'S more perfect to look upon than a graceful, easy-running, noiseless automobile? What's more desirable? When cars are new—just out of the shop—they run this way. Yes, and they'll run this way for years if each car owner will start his first hundred miles with the correct consistency of VICO Automobile Oil, and stay with it thereafter. If you are not using "VICO" clean out your crank case and fill it with "Vico." This oil makes good at all temperatures.

Utah Oil Refining Co.  
Refiners  
Salt Lake



"EVERY  
DROP  
COUNTS"

## Poultry Feeds

VOGELER'S  
PERFECT CHICK  
FOOD



## Vogeler's Perfect Chick Food

Our chick food is a perfect balanced ration, contains ten varieties of grains and seeds, it means early development of the pullets and early marketing of the cockerels, its feeding means life insurance to the chicks and big profit to the poultry raiser. Buy by the sack, 100 pounds \$3.00. Order a sack today and make money out of the poultry business.

## Vogeler Seed Co.

SALT LAKE CITY

## HOLDS THE ONLY WORLD'S RECORD

### For Closest Skimming

THE U. S. Cream

Separator won in the most severe competitive contest ever held, covering a period of 30 days. At all World Expositions where there have been working tests the U. S. has won and received Highest

Award, as has been proved by such Expositions as the Pan-American where the U. S. won in the World's greatest skimming contest; also at the Lewis & Clark Exposition where the U. S. demonstrated its superiority in actual working tests, and at the Alaska-Yukon Exposition where the U. S. scored perfect in skimming efficiency.

Expositions, as in case of Panama-Pacific, which have not judged separators by actual working test render no proof whatever of the merits of one machine over another.

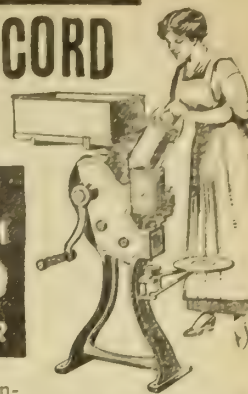
Send for our Catalog and complete information about awards.

### VERMONT FARM MACHINE COMPANY

Chicago  
Salt Lake City

BELLOWS FALLS, VT.

Portland, Ore.  
Oakland, Cal.



—THE—  
UNITED STATES  
CREAM SEPARATOR

## KILL INSECT PESTS

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Our office at Salt Lake City, Utah,  
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Utah Horticultural Society, Utah State Dairymen's Association, Utah State Bee Keepers' Association, Bear River Valley Farmers' Protective and Commercial Association, Agricultural College Extension Department and Utah State Fair Association, Utah-Idaho Millers' and Grain Dealers' Association, Utah Fruit Growers Association.

#### OUR GUARANTEE

We guarantee every subscriber against loss thru dishonesty or attempted swindle by any advertiser in this publication. We do not attempt, however, to adjust trifling differences between the subscribers and honest responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within thirty days from date of the transaction, and the subscriber must have mentioned Utah Farmer when writing the advertiser.

**Advertising Rates**—The advertising rates will be sent upon application.

It is a serious mistake, and we are only deceiving ourselves, when we try to make our money go further by investing in cheap seed.

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Some of our farmers are pleased with the results of co-operative buying. At a number of different places farmers have joined together in buying seeds and machinery, coal and lumber.

Are you keeping accounts? Do you know what your farm is really costing you to run it? Take a small book, put down everything you pay out, both in labor and money, and when harvest times comes you can tell how much money you made.

Let the children have a small piece of land to "plant seeds" in. Encourage the boy or girl by giving them a tract of land to care for and allow them all the profit coming from it. Near the home or in the garden let them plant a few flowers, so they can care for them and "watch them grow." If they learn to do this when young they will learn to love farming.

#### PUBLIC PLAYGROUNDS

Because our farmers nearly all of them, live in small towns or cities they should be interested in providing public play grounds. Children like to

get together for play. A place should be provided so they will not have to play on the public streets. The public play ground has a far reaching effect upon the community. Sufficient ground well located is not easily obtained.

Just as sure as you fail to secure now the sites for playgrounds for your little children and your grown-up children you are neglecting to avail of the best means of bringing your people together for the development of the community co-operative spirit upon which the prosperity and welfare of your community depends. Get the playgrounds.

#### THE GRADE BULL.

Last week we suggested the slogan "Swat the grade bull." We want to again emphasize it for some people took exception to the statement that 90 per cent of all the dairy sires in the state are grades.

The quickest and most economical way to increase the quality of our live stock (unless we buy pure bred to start with) is to buy pure bred bulls. It is only a matter of a few years until we will have good grade stock if we use pure bred bulls. If we don't swat or do away with the grade bulls we can not expect any improvement in our live stock.

Let us boost the movement for pure bred sires.

#### HELP US FIGHT.

We are making a hard fight for clean honest advertising. We turn down a great deal of advertising because we do not believe it would make good with our subscribers. We will not accept any medical, liquor or tobacco advertising.

We do not believe that any paper should accept an advertisement that it cannot stand behind. These fake advertisements and the people behind them are deceiving the public. Now the way that you can help in this fight for clean honest advertising is by patronizing the people whose advertisements appear in our paper from time to time. Mention the Utah Farmer when you answer an advertisement or when you are buying from the local dealer tell him you saw it advertised in the Utah Farmer.

We are just as careful about the advertisements that appear in our paper as we are about the copy that is in our reading columns.

You can depend upon the people who advertise in the Utah Farmer.

#### WHEN YOU WRITE

When you write us a letter, always give your address, and properly sign your name. We have one or two remittances for subscriptions to our paper, when they were received there was no address to the letter, and, unfortunately, we discarded the envelopes before we got the postmark, and, as a result, we are holding these, not knowing where they came from.

Many names are just the same, many of the names are similar, but the people live in different towns, so you can see the problem that confronts us if the proper address and name is not given, when we are dealing with thousands of people.

When you make a remittance, always give us the name that is printed on the paper—in other words—we want the name of the person to which the paper is sent in order that they may get the proper credit. If you will help us in these details, it will improve the efficiency of our office.

#### DR. WIDTSOE'S WEEKLY MESSAGE.

##### HOLSTEIN DAY AT RICHMOND.

Holstein cattle ruled the day in Richmond, Utah, on March 17 of this year. Nearly three hundred choice specimens were collected in the Old Tithing Yard, for the inspection of thousands of farmers who had come from far and near to see Richmond's Pride. Present among the crowd were many of Utah's Jersey breeders, but the black and white alone were discussed. It was a splendid sight. The high bred animals, glistening under the bright sun, the good natured, appreciative crowds, the expert judges pointing out the good and bad points, in the cows and calves and bulls, the glow in the eyes of the lovers of live stock, the hum of voices and the spring in the air—all this made the occasion one to make the farmer smack his lips.

The Richmond Holstein Breeders' Association under whose auspices the exhibit and the auction were held may remain assured that its efforts made a notable day in Utah's agriculture.

It was good to contemplate, as one first class animal after another was examined, that the high efficiency of the cows as milk producers has been brought about by the use of man's intelligence in breeding for a desired end. The farmer need ever keep in mind that nature is his servant. When some new thing is needed to further man's interest, the thing to do is to search it out, for with certainty it will be at last discovered or produced. The high bred cows of Richmond were attained after much patient effort. It was an inspiration to remember that a little more than ten years ago there were no Holsteins in Richmond. It does not take long to accomplish great things, if the right methods are employed. Richmond adopted correct methods. Many leading citizens decided upon the result to be obtained. They stood together and made co-operation their watchword. Richmond was to be famed as a Holstein center. When a community stands together and knows whither it is going, it becomes irresistible.

Richmond's lesson is for the State. The people of each town must stand together for its main business. Division means inferiority or failure. Moreover, no town gets very far along which does not find some one activity to which it can give the larger part of its energy. Let it be Holsteins or Jerseys, or Percherons or Cotswolds or Berkshires or wheat or potatoes or sugar beets or painted barns or clean streets or the best schools or any other thing—but let there be at least one thing in the town for which it is noted in the State and about which the people can talk with pride. Then, the town is as one made new.

The extra bushel is the profit bushel and it is raised by close preparation and good seed.

How about that silo, are you going to build one this year? If you plan to have one, prepare to plant your corn now, you can build the silo after a while, some time before the harvest season, when you are not rushed. It is estimated that there will be three times as many silos built this year than last. Corn is easily grown and makes a splendid ration with alfalfa hay.



# JOHN DEERE Plows for Light Tractors



## High and Level Lift

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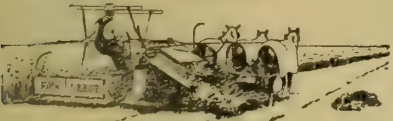
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Utah and Idaho Agents.

# How Tile Drainage Benefits Farm Lands

Mr. J. C. Wheelon of the Utah-Idaho Sugar Co. answers a number of questions on drainage asked by Mr. L. Greene Pres. of the Utah Fire Clay Co.

In response to your queries regarding benefits to farm lands derived from tile drainage I have the following to say:

First—The nature of our ground is, generally speaking, a clay loam with a heavy clay subsoil so far in depth as we know anything about.

Second—A distance, in the neighborhood of 450 feet apart and a depth of an average of 6 feet has served our purpose very nicely. I find that the average distance apart of the 110 miles that we have put in our lands has been 448½ feet and the average depth is 5.6 feet. We have found that this operates very satisfactorily in this heavy clay land and we have used the same in some small tracts of sandy loam with a sandy clay subsoil.

"How long does it take the drains to render alkali ground crop bearing to its full extent or what is the increase in crop bearing for the first year, second year, third year, etc.?"

We find that the ground water is liberated by this system in 35 to 50 days, that is to say, the ground water is lowered practically to the level of the tile drain system. In cases where the tile drains have been put in before the first of August and two irrigations have been applied within two weeks of each other for the purpose of dissolving the mineral that has crystallized on the surface of the ground, passing it down through the tile drains, we have then plowed that ground a couple of times and put it into oats with a nurse crop of alfalfa the following spring and have found the ground was virtually reclaimed in that first year. This upon ground that was nicely leveled where the water could be handled very skillfully so as to not lie around in ponds on the field. Also the ground in its natural state contained from .4 to .6 of 1 per cent of alkali soils of which common salt was a little over 50 per cent. This crop of oats yielded 51½ bushels to the acre and the alfalfa that was grown with it is still a good stand and has been producing an average crop of hay yearly at about 4 tons to the acre in the combined three cuttings and has now been plowed up in the rotation of crops. This is probably the best example we have had in our experience. Our land contains more mineral than this case and are often less responsive to this class of work. Some of our lands are non-productive to the first and sometimes including the second year of this treatment. The principal obstacle that we have to overcome after the mineral and water logged conditions has been relieved is the recovery of the soil organisms. We find that therein lies one of the difficulties in reclaiming the lands that have been non-productive because of alkali and water logged conditions for a number of years.

The soil organisms fail to inhabit the ground and some little delay is encountered in this respect. We have two or three farms that appear to act quite slowly but we can see

some progress each year and we have no doubt whatever of their responding to reclamation. In general we might say that our reclamation as a whole ranges along between these two extremes that have been mentioned so far as the length of time required for reclamation is concerned.

"Do you think lowering the water table by putting in large drains considerable distance apart is as good as putting in a main and laterals closer together?"

I think this would depend on the nature of the soil and subsoil. If I had sandy soil with sandy subsoil I should not hesitate to put the branches in upon the following plan: Place the lines 1 foot in depth for every 100 feet apart. If I could put the drains in 10 feet in depth with a good outfall I should not hesitate to put the lines 1000 or 1200 feet apart. If I was confined to an outlet that was shallow and to a depth in my fields of three feet I would place the lines about 300 feet apart. The Government Expert who has been operating in this district, Mr. A. R. Hart, suggests that the tile should not be over 5 feet in depth in any soil. He believes that the ground

waters should be held at about that distance from the surface and tiles operated on a very low fall with valves or gates located so that water could be prevented from going out of land thereby rendered available as (Continued on page 10)

## LOW PRICED LANDS.

Good Dry-Farm Lands with Surface and Artesian Water available at short depths. Close to good thriving Towns and easy access to Railroads. 160 to 640 acre tracts, \$500 to \$15.00 per tract—\$1 to \$9 per acre. I can conscientiously recommend them. They are the best bargains in this State. They must sell quick. Write to

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People are always looking for something better. If your name or trade mark stands for that, and you continue to give better service or merchandise, your name or trade mark will continue to grow more valuable.

The name and trade marks of some concerns are the biggest and most valuable assets they have. When the buyer and the seller learns the value of a good name and a trade mark we will have partially solved the merchandizing problem. Your signature or your name "signed" to any article should mean that you are responsible or behind the products you offer for sale.



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80 acres at Blackfoot, Idaho at \$100 per acre on good terms. Small house. Excellent barn and granary. This is one of the best farms in the Snake River Valley. The soil is deep and there is abundance of free water. Raised 200 sacks of potatoes to the acre last year. 30 acres in alfalfa. It's a mighty good buy.

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Some of the finest, purest and most nutritious confections made in the world are made with Utah-Idaho Sugar.

Ask for confections made in your home state and you will get the best money can buy.

When ordering sugar be sure to ask for

**UTAH-IDAHO SUGAR**  
ABSOLUTELY PURE

## HOW TILE DRAINAGE

## BENEFITS FARM LANDS

(Continued from page 7)

sub waters for the roots of plants. My objection to this plan is that, while the tile drains are being closed up and are filled with water the aeration of the soil through the tile system is destroyed and I consider aeration one of the chief benefits to be derived from tile drainage for agricultural purposes.

"What do you think of putting drain tile in non-irrigated land, do you think there would be benefits enough to pay?"

In loose sandy soil I would not deem tile drainage of very much benefit as it would be used for aeration only and light soils are presumed to be sufficiently aeriated from the surface. In heavy clay lands however the aeration that is brought about by the drain tiles enables the air to displace water that naturally falls on the ground, causing the moisture to seek lower strata in the soil and allows those waters to sink into the soil much more rapidly than they would otherwise. This saves water from evaporation by getting it into the ground quickly and it would sink down to a lower level, thus inviting the root system of crops to grow down to follow it in this way increasing the area from which the plants can extract the plant food and house the moisture at a depth where capillary attraction cannot draw it to the surface and dissipate it into the air.

Our experience in tile draining dry farm lands leads me to conclude that the increased crop following tile drainage would pay for the drainage in about three crops.

"Do you think it would pay to drain all irrigated land though it does not seem to be seeping or showing alkali and what would be the benefit?"

We have tile drained all of the land embraced in the several units, much of which has never showed signs of seepage or mineral deposit in excessive or hurtful quantity. We believe that the benefits derived from aeration as mentioned above would amply compensate for the cost of tiling.

I may say however in this connection that some of our neighbors who have had some experience in Germany in farm tile drains feel that they are not quite able to tile drain their entire farm and they have adopted the following methods: As their farm begins to show seepage spots and failure to produce crops they will run a line into these spots and portion of the field, first however planning their outlet so that the entire unit can be served by the main line and then await further developments. Then if another plat begins to fail in their field the following year they will follow up the demonstrations of the mineral and waterlogged condition until their entire unit is taken care of. This distributes the expenses over a term of years and they are able to catch the condition before it becomes very bad. Mr. Mathew Baer, who is the manager for the Sommers' farms, tells me that he will guarantee to raise enough more crop the first following year after drainage to pay the entire cost of the work. This however is on condition that he can catch the land before it becomes completely non-productive.



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**Guaranteed 7,000 Miles Service**  
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Double Service Tires are made double the thickness of the best standard make tires. This 100% greater wearing surface naturally gives that much more mileage and service. The average of 12 miles of tough fabric and one inch surface tread rubber makes these tires absolutely punctureproof. These tires excel all others for use in the country over rough and rugged roads as well as on hard pavements. They are as easy riding and resilient as any other pneumatic tire—the air space and pressure being the same. They are the most economical and "care free" tires made and are used where tires must be depended on and tire troubles cannot be tolerated. Many Double Service style tires are in use in the U. S. government and European War service. Our output is limited to a certain amount, but for a short time we offer the following reduced special prices as an introductory offer:

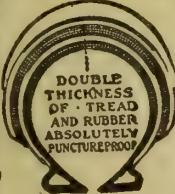
**PRICES**

Tires Tubes		Tires Tubes	
30x3 in.	\$ 8.60 \$2.30	36x4 in.	\$17.45 \$4.65
30x3 1/2 in.	10.85 3.10	36x4 1/2 in.	21.20 5.60
32x3 1/2 in.	12.75 3.20	36x4 3/4 in.	22.50 5.75
33x4 in.	15.75 4.20	37x4 1/2 in.	23.50 6.20
34x4 in.	16.70 4.35	37x5 in.	26.30 6.80

All other sizes not included in above list also furnished. Non-skids at 10% additional. Terms: Payment with order at above special prices, a 10% discount allowed on orders for two or more tires. All personal checks must be certified.

Try these tires now and be convinced of their very high qualities. Sold direct to the consumer only. Descriptive folder upon request. Write for it.

Double Service Tire & Rubber Co., Akron, O. Dept.



## WAR ON WASTE WITH THE Man Behind the Gun



You grow your grain for profit. Wasteful threshing means that both grain and profit are being thrown away.

## Buy or Hire a Red River Special

To do your threshing this year, and get all of the grain that you raise and all of the profit that it will bring.

Everything that will do fast, clean and perfect threshing is to be found in this machine: the Big Cylinder, the Man Behind the Gun, the Beating Shakers, all are there to take all of the grain from the straw.

The patented features of a Nichols-Shepard Red River Special will alone thresh and save more grain than other machines can secure with their entire mechanism.

## Get the Big Run and Save the Farmer's Thresh Bill

**NICHOLS & SHEPARD CO.**  
(In Continuous Business Since 1848)

**BUILDERS EXCLUSIVELY OF  
THRESHING MACHINERY**

Red River Special Threshers, Feeders, Wind Stackers  
Steam and Oil-Gas Traction Engines

(1) BATTLE CREEK, - MICHIGAN

Mention Utah Farmer when you write.

"Is there any difference in the length of time the soil holds moisture if drained or not?"

We find that in cases of tile drained land the moisture is retained much longer than in non-tile drained land, principally, I believe, because the water settles to a much lower strata in the soil quickly after being received on the surface of the ground. In our district here where we have an average of 12 inches precipitation per year we believe that the promptness with which the water settles into the ground in the spring or after heavy showers removes this water to a depth below the action of capillary attraction in time to save one-fourth or one-third of the water that reaches the surface. We accomplish two purposes here; One is that we can conserve moisture that would otherwise be wasted and the other is that it is at a greater depth in the ground causing the roots to grow deeper which is one of the very beneficial effects of tile drainage.

In conclusion I might say that we have been using your tile for seven years and we have had no trouble from deterioration of the tile from disintegration by the alkalis and salts in the ground. Your Company has always evinced a perfect willingness to burn our tile with a sufficient hardness to obviate any difficulty from these sources. We are often asked if we have had any difficulty with the roots of farm crops finding their way into the tile drains and thus closing them up. Our soil naturally being rather heavy the root systems do not develop to the depth that they do in light sandy soils and we have never found any trouble with the roots setting into the tiles to this date. We girdle all of the cottonwood trees or all water loving trees where we have had to cross a line of trees in our lines. We have girdled trees to a distance of 50 feet on each side of our lines where we have come into that proximity of a line of cottonwoods, Lombardis, silver maples, and all such trees as that. We specify in selling our lands that no trees shall be planted within, I believe, 60 feet of any of these tile drains.

We have found alfalfa roots going down around and in very close proximity to our tile drains but we have never found any alfalfa roots inside of the drains. We find occasionally that sugar beets that are planted right over the drain where the ground has been filled in with the soil that was excavated from the trench have reached the tile and entered the joints and they will grow inside the tile 10 or 15 feet in length, very fine hair roots and have been known to close up the tile entirely. These cases are very rare however and in such cases we have found that the beets are very slim and contain no sugar and are hardly worth harvesting and by going along at the last cultivation over these tile drains, which you can notice very well by the luxuriant green of the beets, and with shovels on the cultivator cut the beets off two or three inches below the surface of the ground, this will kill the beets and if there are some of the roots by that time that have entered the tile drain they will die off, break away and float out through the system, causing no further trouble that year. This however has not occurred in our heavy clay soils but it has occurred in some light sandy soils.



The grand prize award bestowed upon Ghirardelli's Ground Chocolate by the Panama-Pacific International Exposition is in exact accord with the judgment of the entire Pacific Coast where Ghirardelli's has long ruled in supreme favor.

A daily cup of Ghirardelli's Chocolate is health giving, health sustaining and always appealing to the appetite. The hermetically sealed can in which it comes is health protecting. Order from your grocer today.

**D. GHIRARDELLI CO.**

Since 1852

San Francisco

OPENED JAN. 1ST, 1913



"The HOTEL that's BEST  
In all the WEST"

WHEN IN LOS ANGELES

STOP at the NEW  
FIRE PROOF

**HOTEL NORTHERN**  
EUROPEAN  
200 OUTSIDE ROOMS  
150 WITH BATH  
420 W. 2ND ST. NEAR HILL  
NORTHERN HOTEL CO., PROP.  
FRANK L. CRAMPTON, MGR.  
RATES \$1.00 PER DAY AND UP.

If you are losing 60% of your water through SEEPAGE, which is the average loss in irrigation ditches, use our LENNON Smooth Flume for Ditch Lining. Instead of building dikes to carry water across your low places, use Flume. It will not leak and will pay for itself the first year, by the water it will save you. Made in all sizes. We sell everything for irrigation.

**UTAH CORRUGATED CULVERT & FLUME CO.**  
Woods Cross, Utah.





## THE HOME

### BRIGHTENING UP THE HOME.

The painting and papering season will soon be here. Lets not put off brightening up the kitchen this year.

You know it is mothers work shop. She is there most of the time. The walls are becoming darker and more grindy every day.

Surely it is a cheerless place for mother. There should be nothing left undone that will make it more pleasant for her. How we all love to hear her singing while at her work.

The more pleasant we make it for her, the more she will sing. Now what color shall we paint the kitchen woodwork? It has been drab or dark so long that it makes one blue to look at it. If there is a color on the color card that ought to be taken off and left off, it is drab.

#### Dark Kitchen Walls.

Now I was engaged in the painting business for over sixteen years and during that time the color I most commonly met with in the average farm home was drab or dark grey.

Many people have a mistaken idea that it does not show dirt or grease spots and is not effected by smoke. The fact is, it shows spots just as badly as other colors and unlike more cheerful and lighter tints, when used on interior work it begins to grow darker the very day it is applied and continues the process until it is almost unbearable in its cold cheerless appearance.

#### Light Colors Preferable.

It is necessary to paint and varnish kitchens and dining rooms more often than the other rooms. Therefore they should be painted in light colors or tints. If this is done one coat of any light tint will cover and make a neat, clean appearance. On the other hand, if drab or dark grey is used it will take at least two coats of any ordinary light color to cover it.

A very cheerful and sunny combination for a kitchen is to paint the woodwork a strong cream, trimming the

cap mouldings on the wainscot and the styles of the doors a darker tone of the same color. Then paint or kalsomine the wall a few tones lighter than the wainscot and the ceiling still lighter.

Another pretty combination is, to use soft tones of brown. Beginning as with the creams, with the darkest tone on the wainscotting. The wall should be tinted with burnt sienna and burnt umber to a very soft brown, the ceiling may be cream or a much lighter tone of the side wall color.

The mistake most often made is in getting interior woodwork too dark. The same mistake is common in regard to wall papers for kitchens and living rooms.

A dark color in rooms much exposed to smoke and steam soon becomes extremely dark, a light color will stand a great deal of darkening before it becomes noticeable.

#### Hints That Will Help The Painter.

The paint used should be gloss paint for the wood work and flat or dull for the walls.

There are many good ready mixed paints on the market that will give the best of results, if the directions are followed closely. Be sure to get interior paint for inside use.

If doing your own work, do not buy a large cheap brush. About 7 0 oval with good bristles will give the best results. It may be washed out with gasoline and laid in the cellar for future use. That size is fine for painting the wagon or machinery and nothing pays better.

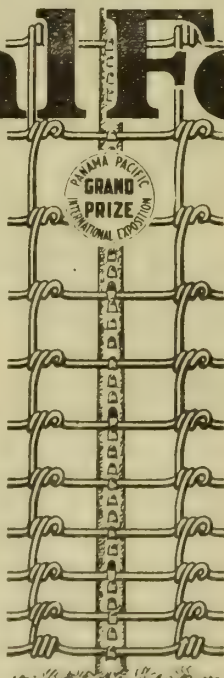
In painting wood work, which has been painted before, do not rub the brush dry on the work expecting to rub the paint in. Paint cannot be rubbed into a painted surface. Lay the paint on evenly, always dipping the brush often enough to keep paint in the bristles. It should work like a fountain pen.

#### Use of Varnish.

If your woodwork is finished in the

## Royal Fence

**H**AS great strength and resiliency. Made of big, strong, stiff steel wire, with continuous stay wires from top to bottom wrapped around each horizontal wire and



Dealers Everywhere

securely held by the Royal loop.

### American Steel Fence Posts

Cheaper than wood and more durable—last a lifetime. Hold fence secure against all conditions.

### Sent Free

Write for booklet on how to set posts and erect fence. Every farm owner should have it.

**American Steel & Wire Company**

CHICAGO NEW YORK PITTSBURGH CLEVELAND DENVER



## BUILD A LOUDEN BARN

### Book of Barn Plans Free.

If you are going to build a new barn or remodel an old one, you should have this book.

Louden Barn Plans is not a catalog of barn equipment. It is a complete and valuable book of reference and instruction on barn construction.

The 112-pages of Loudon Barn Plans are full of dollar-saving information. It contains more than fifty representative designs for cow barns, horse barns, combination and general purpose barns, as well as many other designs for hog barns, pens, hay sheds, etc.

When Writing for This Book Please State When You Expect to Build, and How Many Cows and How Many Horses You Want To House.

We have designs for nearly 4,000 barns and our architects will give your letter personal attention if we learn your exact requirements. LOUDEN BARN EQUIPMENT MAKES POSSIBLE a clean, sanitary barn with a minimum of expenses for upkeep.

#### The Loudon Line Includes

Litter and Feed Carriers. Steel Stalls and Stanchions. Hay Tools. Steel Animal Pens. Barn and Garage Door Hangers. Power Hoists.

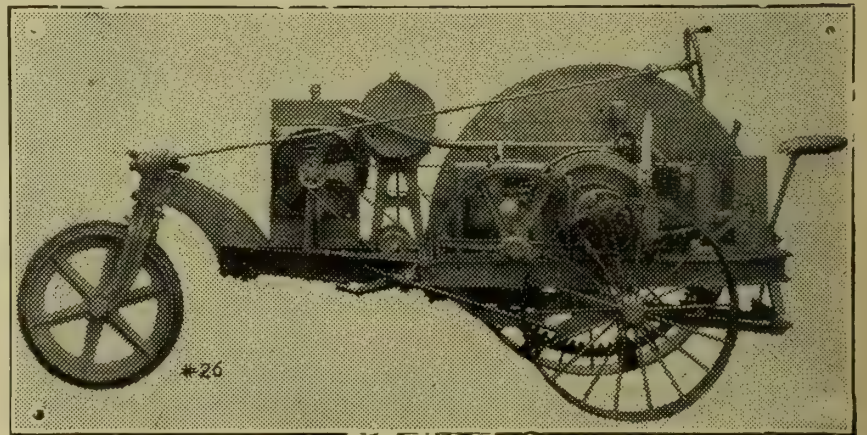
## Miller-Cahoon Company

Murray, Utah

Idaho Falls, Idaho



## 1916 Big Bull Tractor



It burns Gasoline, Kerosene or Distillate. It will pull 2-14 inch Mouldboard Plows or 3 Disc Plows all day and every day, and will plow an ACRE an hour at a total operating cost of less than \$1.00 per acre under average conditions. It will handle on the Belt a 28 inch cylinder Separator with Wind Stacker, Self Feeder and Weigher.

The price is \$800.00 F. O. B. Salt Lake. The weight is 4850 pounds. Terms \$100.00 in cash with the order, and the balance with freight charges to be paid by purchaser upon arrival of Tractor at destination.

Full information furnished upon request.

Sold By

## Utah Implement Vehicle Co.

SALT LAKE CITY, UTAH.



natural wood and needs varnishing to brighten it up, it must be thoroughly cleaned before applying the varnish. Remember, varnish does not cover spots or soiled places like paint, but mirrors everything through, making it more noticeable than before. There is no objection to using soap for this purpose, providing it is carefully washed off with pure water and dried before applying the varnish. To get the best results the old varnish should be lightly sandpapered after it is cleaned and dried, before applying the new coat. About No. 1 sand paper is right for this purpose. The work of course should be carefully dusted after the sanding.

As to the varnish, it does not pay to buy a cheap varnish. A good coach body varnish will give good results in kitchens and living rooms. It will wear well and stand washing with pure water. Do not use soap to keep it clean after the new coat is on, it kills the lustre and ruins the varnish.

**Keep Implements Well Painted.**

A farmer cannot make a more

profitable investment than to buy a gallon of good implement paint and have it always on hand. Paint the wagon, the binder tongue, the plow tongues, the walking plow handles, the doubletrees, everything that needs protection from the elements in the way of machinery should be kept painted. As long as a good coat of paint adheres to wood it will last without checking or decay. It will also keep the iron from being eaten up with rust. It seems nearly as much machinery is lost through rust and decay as by wear. All machine sheds are not weather proof. Snow sometime drifts in through the cranks or rain beats in at the open front. Plenty of pain will resist the attacks of both—Farm Stock Home.

#### PROFIT IN PAINTING

Protect your barn, home or fence with a coat of paint and give it a newness that is worth while. Sun, wind and weather are always at work and slowly they grind away at our buildings. Rust is also another enemy that looses no chance to do its work of destroying. Paint will protect your property and machinery from the elements and rust. By using a little paint you can save money and add beauty to the surroundings. For the time and money spent, paint seems to bring exceptionally good returns. Paint now, and paint anything that needs it. Paint any time you have a chance.

#### THE SPRAYER.

Size of orchard, nearness to water, and size of trees are big factors in determining the size of a sprayer to buy. Generally the following suggestions hold good. A hand sprayer is sufficient for two or three acres. For 3 to 10 acres of full bearing trees a small power outfit equipped with one lead of hose will do the work. A duplex outfit is needed for an orchard of from 10 to 20 acres and a triplex outfit for 20 to 30 acres. Keep the chemicals in your solution well stirred. A curved bottom cypress tank is the best. A belt connection from the engine to the pump is better than a chain. A 35 foot hose is the most convenient length. Always buy the best hose.

#### QUESTION AND ANSWER.

Utah Farmer:

Gentlemen: — What is carotin? What feeds are rich in it?

A. R.

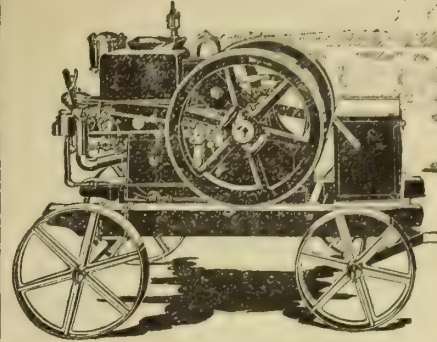
Answered by Dr. W. E. Carroll  
Carotin is an organic compound of a hydro carbon nature. Practically it is the principal coloring matter of butter fat. Green grasses, hay cured under a good green condition, carrots and other roots and vegetables having a yellow color are very rich in this substance.

#### FOR SALE CHEAP

The Golden Glow Farm 320 acres best quality land in the heart of Gem Valley. Four miles west of Alexander, Idaho, five miles Northwest of Grace, Idaho, 1½ miles from \$10,000.00 school house and church, 3 miles from railroad. 35 acres in hay with excellent water right. Balance in grain and summer fallowed. The best improved farm in the country. Free from frost. Buy direct and cut out the middle man's commission. Write or call on C. A. LLOYD, Alexander, Idaho.

Send in your order for Butter Wrappers today.

## Power for Forty Farms



**Mogul and Titan Engines**



**T**WENTY Titan engines of all sizes, all kerosene burners, were lined up in front of the I H C dealer's store at Litchfield, Minn., one day last summer. That day their new owners took them out to supply good, reliable power on twenty farms. A few months later Litchfield saw twenty more farmers take Titan engines out to their farms.

Two big I H C engine delivery days in that town last year. In many hundreds of towns you will find this same popularity of I H C Mogul and Titan engines—the best farm power—Grand Prize winners at San Francisco.

You must have an engine—then buy an International Harvester engine—Mogul or Titan. It will keep down your fuel and repair bills, deliver the most power with least trouble, and save you more hard work than you can realize now.

International Harvester engines are made in all approved styles, sizes from 1 to 50-horse power, operating on low as well as high-grade fuels. Some local dealer near you handles Mogul or Titan engines. If you don't know him, drop us a line. We'll send you full information, and make it easy for you to get the best farm engine made.

**International Harvester Company of America**

(INCORPORATED)

218 So. 6th West St., Salt Lake City, Utah.



## THERE IS NO DIFFERENCE

Great experts agree that highly refined beet sugar is exactly the same, both chemically and diatetically, as the fanciest imported cane sugar. Your purchase of Table and Preserving Sugar brings quality and also upbuilds an industry of the west.

**AMALGAMATED SUGAR CO.**  
OGDEN, UTAH.

WHILE IN SALT LAKE  
GO TO THE

**WILKES** THEATRE  
ON STATE ST.  
ERNEST WILKES STOCK CO.

Highest Class Royalty Plays

NEW BILL EVERY SUNDAY

Matinees Thursday and Saturday

Evenings 15-25-35-50c  
Matinees 15-25c

## Watch for the Royal Label



You should be even more careful in looking for the Royal Label on Bread and Bakery Products than the label of your favorite tailor on a suit of clothes.

Your health depends on the food you eat. If you demand—

**ROYAL  
TABLE QUEEN**  
"The Perfect Bread"

you are getting the most perfect bread that can be baked. Think of bread being made with a blend of from three to four of the highest grade flours to be produced. The other ingredients for Royal Table Queen are selected with great care. The next time you are in Salt Lake call at our bakery and see how Royal Bread is made in a thoroughly modern sanitary establishment.



Fresh Royal Table Queen at your grocer's; five and ten cent loaves. Demand the Royal label on your bread; it is your guarantee of quality.

**Royal Baking Co., Salt Lake City, Utah**



**WHITMAN BALERS** 14 Years the Standard



A Money Maker For You  
Strongest, Most Durable, Most Economical, and Simplest Baler Made—best work—capacity 10 perfect bales in 5 minutes—exclusive features. Fully guaranteed 50 styles. Hand Horse, Belt and Engine Power. Write for free catalog. Whitman Agricultural Co., 6948 S. Broadway, St. Louis, Mo.

**ROWE'S HOG OILER**  
New Idea



Only Oiler made without valves, cylinders or wheels. Can't clog, stick, leak or get out of order. Guaranteed 6 months. Use crude or Medicated oil. Kills Lice; keeps pens and yards disinfected. One Oiler cares for 30 to 50 hogs. \$9.25 delivered.

**CALKO HOG POWDERS**  
is a Hog conditioner and Worm expeller. 25 lbs., \$2.00.

**HEALTHY HOGS MORE PROFITS**  
Catalog Sent Free.

**CALLISTER-KORTH CO.**  
McIntyre Bldg. Salt Lake City, Utah

**Buy Your LUMBER Direct From MILL**



**SAVE 20 to 50%**  
on Your Next Lumber Bill

Draw up a list of what you want and mail it to us. We ship you direct and cut out the middleman's profit. We give you Fir lumber fresh from the saw, clear and clean. Guaranteed quality and prompt shipments.

Write Today—We will Save You Money

**Pacific Coast Sawmill Company**  
832 Dekum Building Portland, Oregon.

**Cut the Cost Of Ditching**



**Martin FARM DITCHER AND ROAD GRADER**

Drainage and irrigation ditches are easily made and cleaned out with this improved light draft ditching machine. Makes V-shaped ditch with a slope of 45 degrees—sides won't cave in. Unequaled for hill-side work, road grading, terracing, building levees and borders. Reversible—easy to operate.

**All Steel, Simple, Practical**

No wheels or levers to break or get out of fix. Lasts a lifetime. Quickly pays for itself. Price only one-fifth of big clumsy machines—does same work. Thousands of satisfied users throughout the United States.

**Sold On 10 Days' Trial**  
with money-back guarantee. Write today for free illustrated booklet and full particulars.

**OWENSBORO DITCHER & GRADER CO., Inc.**  
Western Branch  
248 Evans Block. Denver, Col.

## POULTRY

### EARLY HATCHING BEST

H. L. Kempster, Missouri A. C.

There is practically everything to be gained and nothing to be lost by setting hens as soon as possible now. The chicks will thrive much better during the cooler weather and the hen should be spared from setting during warmer weather. The first young chickens marketed always bring the best prices and the early hatched pullets will mature early enough to lay next fall which is not true of the later ones. Winter eggs depend partly on early hatching.

Select a healthy hen and try her for a day or two on the nest before risking valuable eggs under her. An odd number of eggs—usually eleven, thirteen, or fifteen—should be used, particularly in cool weather as they lie in a more nearly perfect circle.

As soon as the hen becomes broody make a nest for her in a separate hatching room or a place where the other hens will not have a chance to disturb her. The nests should be sixteen or eighteen inches square and at least eight inches deep depending somewhat upon the size of the hen, but it must be roomy. In nature it would be placed on the ground and if this is not possible in the poultry house a large sod should be placed in the bottom of the nest and then covered with straw to help keep the eggs from drying out too rapidly.

Either allow the hen to leave the nest for food and water whenever she wishes or remove her once a day for that purpose.

Lice should be controlled by dusting the hen with insect powder at the beginning and again ten days later. It is a good plan to rub a bit of blue ointment about the size of a pea into the skin beneath the vent and to rub a little more into the feathers on the under side of the wing at hatching time. This partly rubbed off on the chicks and helps keep the lice away.

Remove the chicks as rapidly as hatched and later return them all together to the hen for brooding, but be careful that they are not chilled while away from the mother.

### SELECTING EGGS FOR HATCHING

Corn growers have learned to exercise considerable judgment in selecting their corn for planting, and farmers in general try to breed from their most promising stock. The average farmer, who often looks upon his poultry as an unnecessary nuisance, pays very little attention to selecting his eggs for hatching. He is apt to think an egg is an egg, and pick out the setting promiscuously from the market basket. Follies of such a practice are pointed out in a recent bulletin by the California station. About this particular phase of hatching and rearing of chicks, the author, Mr. J. E. Dougherty, gives the following advice, which is as important as it is timely.

'Care and judgment should be exercised in the selection of the eggs that are to produce the future layers. These eggs should be selected for (1) size, (2) shape, (3) uniformity of size, (4) shape, (5) color, (6) uniformity of color, and (7) texture.

'Eggs with weak shell texture break very easily when being turned (Continued on page 15)

# SPECIAL

High Grade, Carefully Recleaned  
Alfalfa, Red Clover,  
Alsike Clover,  
White Dutch Clover,  
Sweet Clover,  
Grass and Garden Seeds

SEND FOR BIG CATALOGUE  
POULTRY SUPPLIES

**Vogeler Seed Co.**  
Salt Lake City, Utah

## SALE OF STATE LANDS BURLEY, IDAHO April 22, 1916

The following list of lands will be offered for sale at Burley, Idaho, on Saturday, April 22nd, 1916.

The total area of these lands is 6158 acres, of which 1380 acres are in Minidoka County and 4778 acres in Cassia County. Of the land in Minidoka County 1096 acres are irrigable; the balance is either above water or is taken up by canals, railroads, etc. In Cassia County there are 1558.32 acres Gravity Land and 1978.7 acres of Pump Land.

The price of the land has been fixed at from \$10.00 to \$15.00 per acre, with an average of about \$12. The terms of sale are 10 per cent cash on the day of sale with one year's interest payment; the balance is payable in forty equal annual installments with interest at 6 per cent on deferred payments.

A water-right costs \$42.00 per acre on the Gravity Unit and \$57.50 per acre on the Pumping Unit. A payment of 5 per cent of this amount is required at the time of filing a water-right application, after which there is no further payment for five years. Then there are five annual payments of 5 per cent each and ten payments of 7 per cent each, making the entire amount payable in twenty years without interest. Purchasers are required to reside within fifty miles of their land, at the time of filing water-right application.

The cost of operation and maintenance is based on the amount of water used. In 1915 the charge on the gravity unit was 60c per acre for the first acre-foot and 5c per acre-foot for excess. It has not yet been fixed for 1916. On the pumping unit the price set for 1916 is \$1.00 per acre for the first acre-foot and 40c for each additional acre-foot.

It is generally conceded that the Minidoka Project has one of the best water-rights of any project in the State. Last year, which was the driest ever known the Minidoka Project not only had an abundance of water but was able to sell 150,000 acre-feet.

In general the land in Minidoka County is sandy loam, and that in Cassia County is a clay loam. It is fertile and raises large crops of alfalfa, clover, potatoes, sugar beets, wheat, oats, corn barley, peas, large and small fruits, etc. Dairying and stock raising have proved very profitable.

The project is traversed by the Twin Falls, the North Side and the Oakley branches of the O. S. L. R. R., and by the Salt Lake and Idaho R. R. All of the land lies within one to seven miles of a railroad station, the most of it being within four miles.

There are three thriving towns on the project, all of which are well provided with churches, schools, etc.

For further or more detail information apply to Project Manager, Rupert, Idaho.



# THE FARMERS' MARKET PLACE

**For the Buyer**

This market place offers our subscribers and readers a very good place to advertise. If you have something to sell or want to buy here is the place to tell it. These advertisements are read because they offer bargains, your bargain should be here. Take advantage of this opportunity today.

**For the Seller**

## Gem Herd of Improved Chester White Swine.

This Herd Bred, Raised and Sold. Both Boar and Sow Grand Champions of the World's Fair held at Frisco his last year. Both Sire and Dam, still in the herd. If such breeding interests you, write for illustrated catalogue. Stock of all ages for sale at all times.

Address

**GEO. H. LAWSHE**

**Falls City Idaho**

### FOR SALE

Foundation Stock in Holstein Fresian's and Duroc Jerseys. Will exchange a few for hay or grain. For breeding and particulars write **JOHN W. STUBBS** R. D. No. 2. Provo, Utah.

### FOR SALE

3 Registered Hereford Bulls, also some females, 9 Registered Angora Buck and several Does, a fine lot of grade calves. Will crate and deliver to any R. R. station in Utah, 5 weeks old Registered Berkshire pigs for \$15.00 each. Check with order.

**JAMES G. OLSEN**

**Resgo Farm Ephraim, Utah**

## HERRY CREEK DAIRY FARM OFFERS YOUNG BULLS

### FOR SALE

Herd Sires: Rag Apple Korn-lyke 13th, Grand Champion Utah State Fair 1915. Sire Ray Apple Korndyke. Dam Fairview Mabel Korndyke. A. R. O. record as a 3 year old 25.51, Bt 4.83 fat. Rag Apple Valerie. Sire Rag Apple Korndyke 13th, Dam, Princess Valerie. A. R. O. record 3.00 Bt from A. R. O. Dams.

**NELSON BROS. Props.**

**Richmond Utah**

## ALFALFA AND SWEET CLOVER SEED

Write for samples and prices **Sevier Valley Mercantile Co.** Salina, Utah.

## BUTTER WRAPPERS

We carry a large stock of the Best Vegetable Parchment Butter Wrappers and Especially Prepared Ink for Printing the same. We furnish them Postage prepaid at the following Prices money to accompany order.

100	.....	\$ .90
200	.....	\$1.25
500	.....	\$2.00
1000	.....	\$2.75

Send all orders to

**THE UTAH FARMER**

**LEHI, UTAH**

### IF YOU WANT A BARGAIN "SEE ME."

100 acres good land under Strawberry valley irrigating project, only 2½ miles from Payson sugar factory, fine proposition for beets and general farming, only \$7500. Terms or take city property at right figure.

320-acre well improved ranch, fine 9-room modern brick residence, one 6-room house, one 4-room house, large barn, extra fine springs (would make good summer resort), good water right, independent electric light plant, land adjoining held at \$150 per acre, located one mile from good town in Sanpete county, first-class stock and dairy proposition; all implements and some stock go with place; improvements alone cost over \$20,000. For quick sale only \$25,000—\$7000 cash, balance reasonable, or might take first class real estate at cash value.

**GEO. W. DANLEY**

**Was. 2989. 707 Walker Bank Bldg. SALT LAKE CITY**

## Money to Loan

On improved farms with primary water rights, at reasonable rates.

Quick Service.

We lend our own funds.

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Home Office  
11th Floor Boston, Bldg.  
Salt Lake City, Utah.

**HOUSE AND BARN PLAN BOOK** FREE—Gives direct from-mill prices on many designs. Send us your carpenter's bill for quick estimate. Western Lumber and Millwork Company, Tacoma, Washington.

## Alfalfa Seed

16c lb. in lots of 100 lbs. or more. 16 1-2c in less quantities. Terms cash.

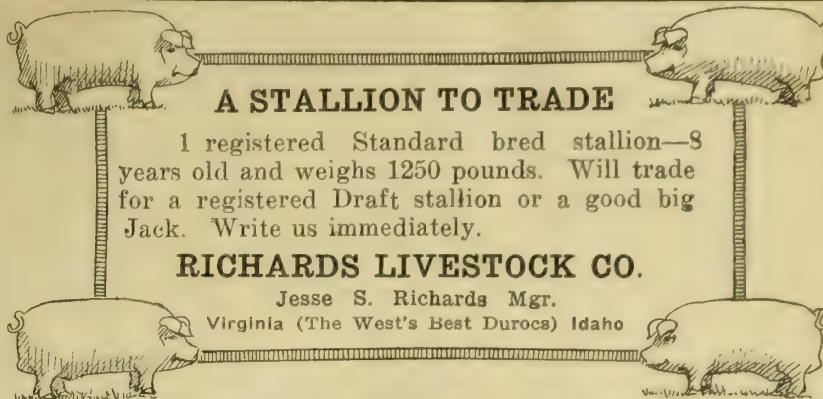
## Alfalfa Chaff Alfalfa Hay

**A. A. HINCKLEY,**  
**Hinckley, Millard Co., Utah**

### EGG MACHINES.

Our Leghorns are truly worthy of the name. Hardy Laying Paying Strains. We are offering the biggest chick bargain of the season—try us and be convinced. Ask for circular.

**MANTI MAMMOTH HATCHERY CO.**  
**Manti, Utah.**



### A STALLION TO TRADE

1 registered Standard bred stallion—8 years old and weighs 1250 pounds. Will trade for a registered Draft stallion or a good big Jack. Write us immediately.

**RICHARDS LIVESTOCK CO.**  
Jesse S. Richards Mgr.  
Virginia (The West's Best Durocs) Idaho

**BABY CHICKS & HATCHING EGGS**  
White Leghorns, Brown Leghorns, Barred Rocks, R. I. Reds, Black Minorcas, Anconas, Buff and White Orphingtons. Prices on application.  
**THE ORLAND HATCHERY**  
Orland, Glenn Co. California

**4—BEST LAYING STRAINS—4**  
tose Comb Rhode Island Reds and White Wyandottes, Single Comb Black Minorcas and White Leghorns. Egg fertility and stock guaranteed. Write your wants.  
**E. C. Blanpied, Box 60, Milford Utah.**

### DAY OLD CHICKS

From our own S. C. White Leghorns, selected as layers from stock "bred to lay" for four generations. Eggs for hatching from these and S. C. R. I. Reds. Book orders now. Bates and Sons, Provo, Utah, R. F. D. No. 1—Box 310. Breeders of Airedale Dogs. Write us.

### BABY CHICKS

Single Comb White Leghorns. The kind that pay for five or six years. Especially bred for long profitable service. Send for booklet. Early orders insure your wants.

### MOUND VIEW FARM

**R. D. No. 2 Brigham, Utah**

### EGGS FOR HATCHING

Pure bred Black Minorca and Buff Orpington. Splendid laying strains. \$1.00 for 15; \$5.00 per 100. Mrs. P. Maher, 639 Seventh Street, Ogden, Utah.

### BOURBON RED TURKEY EGGS

At rate of 3 for a \$1.00 or 10 for \$3.00. Order from this ad.  
**B. F. ELIASON**

**Moroni**

**Utah**

### WE MAKE

Farm and Ranch Loans  
in Utah, Idaho,  
Wyoming, Oregon and  
Colorado.

### MILLER & VIELE

**803-7 Kearns Bldg.  
Salt Lake City.**

Mention Utah Farmer when you write.

### SELECTING EGGS FOR HATCHING

(Continued from page 14)

during incubation. Those that are either too large or too small make the work of turning more difficult because of the lack of uniformity of size. Brown eggs ordinarily hatch approximately twenty-four hours later than white eggs, and it is therefore not advisable to mix brown with white eggs in the same incubator. Further, the goodsized egg will hatch a heavier chick than a small egg. The small chick is seriously handicapped when forced to compete for food and warmth with the larger and stronger ones.

"Like tends to produce like. If constant and rigid selection along the above lines is practiced in picking out the eggs for hatching, it should follow that uniformly good chicks will be hatched. If the size and shape of the egg are inherited characters, continued careful selection of hatching eggs should result in the development of a flock, in a few years, in which all the hens will lay uniformly large, wellshaped, evenly colored eggs, of good shell texture. Size must be an inherited characteristic, because the laying of large eggs is a breed characteristic of the Minorca. Color of eggs is also a breed character.

"Therefore it is reasonable to assume that the selection of choice eggs weighing from twenty-four to twenty-six ounces per dozen, and which have been carefully selected for uniformity of size, shape and color, will not only make the handling of these eggs during incubation easier, but will result in the building up of a flock that will average a larger percentage of 'extras.' Every increase in the number of good sized eggs laid by a given flock means an increased profit to the owner."

After the eggs for hatching have been selected, they should be kept in a dry room of about 50 degrees. They must not be kept too long, preferably not longer than two weeks. A good place to keep them is in an ordinary commercial thirty dozen case. Keep turning this from side to side each day, first with a setting upright, then on its side, then bottom-side up and then on its fourth side. This will turn the eggs in a little each day, and they will be the better for it. The precaution will not be necessary if one is hatching under a few hens only.





# DOLLARS OR DEAD HOGS?

## WORMS! WORMS! WORMS!

Worms are the most deadly enemies of your hogs. All hogs have worms from the time they are a few weeks old. Worms hatch in the stomach sapping the very life blood and vital forces supplied by the food, leaving the animal weakened, a sure and easy prey to disease; worms clogging the intestines, causing fever and indigestion; worms boring through the intestines and working their way into the liver; worms in the lungs, causing irritation, coughing, congestion, jerking in the sides and death, worms wrigling through other parts of the body causing irritation, inflammation, ulcers, decay, pus poison—Death.

When you consider that this trifling outlay will keep you from wasting 20 per cent of your feed in feeding worms and will give your hogs a fine finish in less time, on less feed, you must admit that the money is well spent.

## SEND US YOUR ORDER NOW

—25 lb. SACK ( DELIVERED PARCEL POST ) \$ 2.00  
 —50 lb. SACK ( DELIVERED FREIGHT ) \$ 3.50.  
**SAVE YOUR HOGS.**

**Hogs and Worms Mean Dead Hogs---  
 Hogs and Calko Hog Powders Mean  
 Hog Profit In Your Pocket**

**DO NOT WAIT UNTIL YOUR HOGS ARE SICK TO DOCTOR  
 KEEP THEM HEALTHY—GIVE THEM**

## CALKO HOG POWDERS

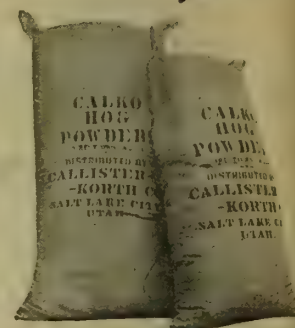
Worms weaken the hog and makes it easy prey for disease. Calko Hog Powders will rid your hogs of the death dealing worms and when fed regularly will keep them free from the pests.

From five to eight pounds of Calko Hog Powders is all a hog needs from the time it is weaned until it is ready for the packing house. About 50c is all it will cost you to make sure that your hog will live and thrive and bring you the highest market price.

Acknowledged highest authorities declare that more Hogs are Killed by worms than any other cause.

## CALLISTER-KORTH CO.

Office 801 McIntyre Bldg. SALT LAKE CITY, UTAH.



## Cattle Ranch

SOUTHERN UTAH

640 acres, all fenced and in wild hay. Splendid decreed water right and living springs.

Finest grazing right on two forest reserves.

Near splendid winter range.

Cattle at market price.

\$25.00 per acre.

1080 acres, south end of Rush Valley, Utah, 800 acres can be cultivated, 200 acres now under cultivation.

Three large living springs..... Open free winter range and adjoining forest reserve.

75 head Hereford cattle. 100 head splendid horses.

Fully equipped for farming and ranching.

Price \$22,000.00—Good terms.

## Taylor Brothers

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Salt Lake City, Utah

See us for other splendid snaps.

## FIELD PEAS

## VETCHES

**Make valuable crops---You  
 should plant some this  
 spring.**

**Our stock is extra fine this season.  
 Send for prices today.**

**BAILEY & SONS CO.  
 RELIABLE SEEDSMEN  
 SALT LAKE CITY, UTAH**



# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region

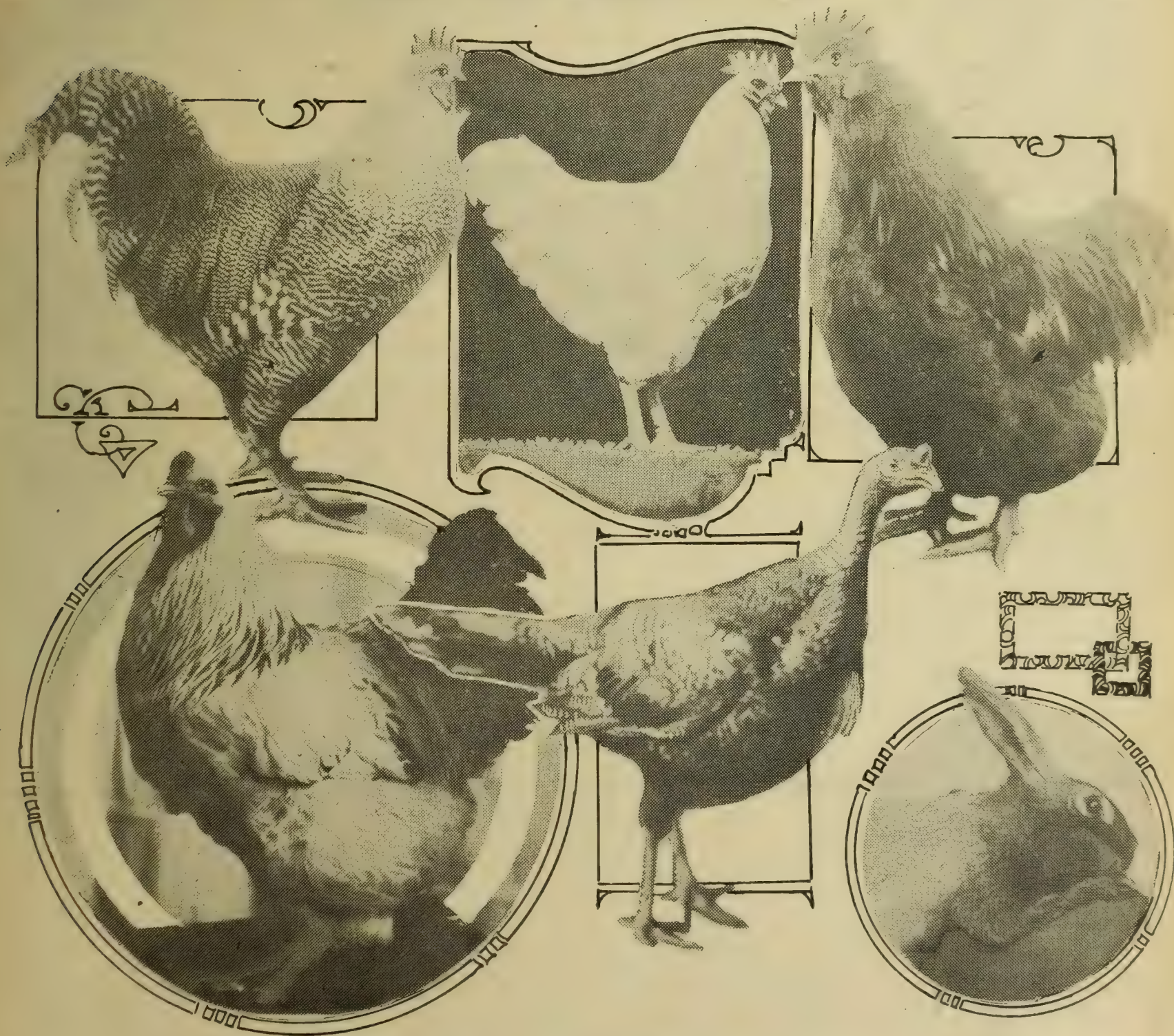
OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE

VOLUME XII; No. 39

LEHI AND SALT LAKE CITY, UTAH

APRIL 29, 1916

## Some Prize Winners of Utah



We Should Produce More Poultry Products



# Study Prof. McClellan's Piano Course BY MAIL



**YOU SHOULD KNOW** of the new method of Piano Instruction just published by Prof. J. J. McClellan.

## YOU CAN LEARN BY MAIL

This course — published expressly for the instruction of those who are unfortunately situated far from the musical centers—is the result of Prof. McClellan's many years teaching experience.

**GET THE BENEFIT OF PROF. McCLELLAN'S INSTRUCTIONS**—it combines his wonderful ability as a teacher—with the superb mastery he has shown as a performer and gives it all to you in a concise understandable form by mail.

## THIS IS THE REAL—BY MAIL— COURSE

The one The UTAH CONSERVATORY of MUSIC is offering and teach its students of the Piano. The real by mail course.

**OTHER COURSES FOR THOSE WHO DO NOT CARE TO STUDY PIANO**—practical course in Organ, Voice, Violin, Dramatic Art and Band Instruction all by the best instructors the West can get.

**INVESTIGATE TODAY—IT WILL COST YOU NOTHING.** Without obligation on your part, fill out and send to us the coupon below. You will receive the information you request, by return mail.

## Utah Conservatory of Music

Templeton Building  
Salt Lake City,  
Utah.

### MAIL THIS COUPON

UTAH CONSERVATORY  
OF MUSIC

Templeton Building,  
Salt Lake City, Utah.  
Gentlemen.—Send free information regarding the course checked. It is understood that I am not obligating myself in any way.

Address.....

Name.....

City..... State.....

Piano..... Violin.....

Organ..... Dramatic Art.....

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## VOGELER'S SPECIAL Hog Pasture Mixture



## Raising Hogs for Profit

By feeding them on grain and keeping them in small inclosures has proven to be unprofitable, but by providing them with our clover pasture mixture they can be produced very cheaply and at a good profit to the grower. The different varieties of

clover that Vogeler's special hog pasture mixture contains gives them a healthy appetite, this combined with a light grain ration, will mature your hogs quickly, and money making proposition. Sow a few acres now, it will prove a winner. 15 pounds per acre is sufficient, only 20 cents per pound. Order now and make money out of your hogs.

## VOGELER SEED CO.

SALT LAKE CITY, UTAH.

# YOU HAVE BEEN LOOKING FOR THIS CHANCE

## A NICE LITTLE FARM OF 50 ACRES

that can be bought for \$75.00 per acre and will make you the permanent farm proposition you have wanted.

The soil is a rich, black loam—raises Alfalfa, Beets, Fruit, Garden truck, etc.

## PLENTY OF WATER

Prior water right—water at \$1.00 per acre when used.

On the railroad and adjacent to two very live mining camps. Good market for farm products.

## GOOD SCHOOLS CLOSE BY

**WRITE US TODAY** for information—or better—come in and see us about it.

## THIS IS A REAL CHANCE

## W. C. ALBERTSON

604 Dooly Building

Salt Lake City, Utah



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# THE UTAH FARMER

Devoted to Agriculture in

the Rocky Mountain Region

COMBINED WITH THE DESERET FARMER AND ROCKY MOUNTAIN FARMING

ONE DOLLAR

A YEAR.

FOREIGN

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\$1.50

VOLUME XII.

LEHI, UTAH, SATURDAY, APRIL 29, 1916

No. 39

## Poultry Success

A LABOR OF LOVE—A THINKER—A WORKER.

All men are not fitted by nature to undertake, with a reasonable expectation of success, the breeding of poultry. Some are constitutionally unfit for the work. Poultry breeders are born with a certain liking for the work, with all its details, and only need a certain amount of educational experience in order to succeed. Others are born with tendencies which make them reluctant to study and practice details, and, though they should begin young and live to a ripe old age, the experience would not fit them for the industry. But no one knows, until after trial, who will and who will not succeed in the work, hence the counsel so often given, and, unfortunately, not always heeded, to

it is, is hidden from view, and what is true of professional success is true of success in every kind of business, and is profoundly true of the poultry industry.

The breeding of poultry demands a vigorous physical basis. It is not a work for those who are weak in body. An invalid, it is true, may succeed with a few hens and rear a few chickens, and in so doing keep his mind pleasantly employed and his hands engaged not beyond his strength. He may by this open-air work regain his lost strength and health, but that is recreation, not business. As soon as the fowls become numerous enough to make their keeping a business, the poultry keeper needs to be a man, and in possession of a man's strength, for a man's work will be required of him.

Women, it is true, are sometimes successful poultry keepers, but some women have a vigor surpassing that of many men, and sometimes they have the hard work done for them by men, their keen and alert minds directing the work only. A strong physical basis, a power of endurance, are needed for every kind of success. Even mental success depends upon the power of continuous hard work, and many a bright youth has failed to achieve the promise of his early years because the physical basis was wanting.

Brains as well as brawn are demanded in the poultry business. The poultry breeder must be a thinker as well as a worker. There are hundreds of problems to be solved; there are hundreds of plans to be made, and to these poultryman must apply his mental powers. The man who plans best will execute best. The man who studies most diligently will succeed most amply, and the man who uses brain and brawn in conjunction will accomplish, at least in a high degree, what he sets out to do.

To be a successful poultryman does not necessarily require that a man be a profound mathematician, nor a subtle philosopher, nor yet a financial genius; but he should have a profound poultry mind, a mind which will grasp a general plan, seize upon its multitudinous details, be quick to observe the smallest as well as the greatest things, and a will which will compel the doing of what ought to be done. Whether he shines in other ways or not, he must shine as a breeder of poultry. To other men he may seem to be an ordinary man, possessed of only ordinary faculties and qualifications, but to those in the "know" he will be a man furnished with the essentials for success.

As all men are not born with and  
(Continued on page 7)

## Money In Turkeys

For those who are favorably situated for raising turkeys, a more profitable side line can hardly be found. Given plenty of range where the turkeys can find grasshoppers and other insects, green vegetation and other weeds and grasses, waste grain, acorns and nuts of various kinds, the cost of raising them is very small and the profits large. Grain and stock farms are particularly well adapted to turkey raising, and it is on such farms that most of the turkeys are found. Little has ever been done in the way of raising turkeys in confinement, and where it has been tried the results have been discouraging. Plenty of range is essential to success in turkey raising.

### Breeding.

In selecting turkeys for breeding, the most important factors to be considered are vigor, size, shape, bone, early maturity and color of plumage. The body should be deep and wide, the back broad, and the breast round and full. The head should be of good size and of clean, healthy appearance. A strong, well-made skeleton is shown by thick, sturdy shanks and straight, strong toes. It should be the aim of every turkey raiser to have a flock of pure bred turkeys, even though they are sold at market prices. The male at the head of the flock should by all means be a pure-bred of the best type obtainable. The male is one-half the entire flock, and by continually selecting the best females of a similar type and mating these with a pure-bred male, one can soon have a flock of uniformly large, early-maturing, strong boned, long and deep bodied turkeys of the same color.

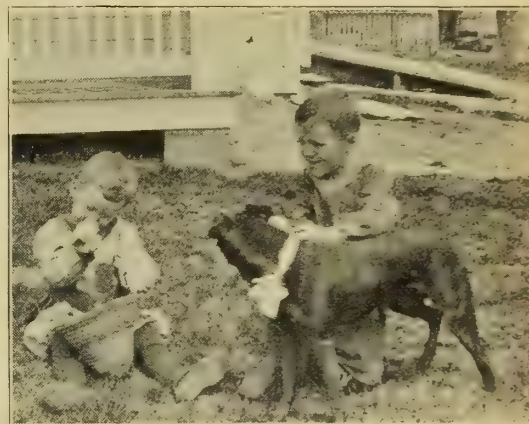
Fifteen turkey hens can safely be mated to a vigorous tom. If 25 or 30 hens are kept, two toms should not be allowed to run with them at the same time, but one should be confined one day and the other the next. When two toms are allowed to run together during the mating season, they fight badly and the stronger does practically all of the mating.

### Laying

Turkey hens are wont to "steal" their nests in hidden places, such as a patch of weeds, tall grass or thick brush and often wander a half mile or more from home before they find locations that suit them. To find these stolen nests often proves to be a long and tedious task, the usual method being to follow each turkey hen as she separates from the flock and starts toward her nest, care being taken that she does not know she is

being followed. A much easier and quicker method than this is to confine the hens early some morning soon after they have come down from roost and let them out late in afternoon. Those that are laying will then head for their nests in order to lay the eggs they have been holding.

If many turkeys are kept, the use of a breeding pen will be found a great convenience. This pen should cover a sufficient area to allow the turkeys some exercise, an acre for fifteen birds being none too large. A hog-tight wire fence three feet high will hold most turkeys, and if any persist in flying out, the flight feathers of one wing should be clipped. Nests should be scattered about the pen, those which turkey hens take to most readily being barrels turned on their sides and nests shaped in them with straw.



Turkey hens, chicken hens and incubators are commonly used to incubate turkey eggs. During the early part of the laying season it often happens that one has on hand a number of eggs that should be incubated before any of the turkey hens are through laying their first litter and become "broody." In such case, and also when it is desired that the turkey hens lay more than one litter, some of the eggs have to be incubated under chicken hens or in an incubator. About a week before the poults are due to hatch, turkey hens enough should be allowed to sit to take all the poults hatched. They can be given a few eggs from the incubator or from under the chicken hens and allowed to hatch the poults themselves, or at night a newly-hatched poult can be slipped under each turkey hen that is to be given a brood of poults and by morning she will be glad to take them.

### Lice.

Lice are a great annoyance to sitting hens and are one of the worst

(Continued on page 13)



begin small and grow into the business, is safe, sound, sane and worth following:

There is one point which must be kept eternally in mind, and that is that poultry breeding as a pursuit is emphatically a labor of love, but it is nevertheless a labor. There is much work connected with it, and some of the work is neither clean nor light. One who really loves the pursuit does not mind the disagreeable work it necessitates. With him it is true that "love lessens labor, and in his enthusiasm for his work he may unconsciously, and with no thought of misleading, represent the work as light and inviting. But it is never to be forgotten that success in every undertaking is won through hard work. The successful minister, lawyer and doctor knows that the spectacular triumphs rest upon a foundation of numerous, difficult, often disagreeable details. The public sees only the bright side of the professional life. Its dark side, absolutely essential as



## Household Remedies as Cure-Alls

Fifth Article by the State Dairy and Food Department and State Board of Health.

A person doesn't have to be a physician with an M. D. after his name in order to understand a few of the simpler rules of physiology and therapeutic values. One doesn't have to be told by a doctor or a scientist that the constant taking of laxatives is injurious. A laxative now and then when needed is an excellent home remedy for a good many illnesses but a laxative is merely an aid to nature and if nature is given too much assistance she will get lazy and loaf on the job. All one needs have is common horse sense to understand that the daily taking of such medicine cannot be other than injurious.

In this connection we wish to refer specifically to a medicine now on the market and advertised extensively in the press as Limestone Phosphate. As far as the name is concerned it is a misnomer—there is really no limestone in it. But it does have good therapeutic properties in that it is a laxative, its ingredients being sodium bi-carbonate and sodium phosphate. The fraud being perpetrated is in the advertising of the nostrum, people being urged to take some of the dope daily in order to "wash the poisons from the system and give the body an inward bath."

We wish to pay a tribute to the man who writes the advertisements for Limestone Phosphate. He is, without doubt, one of the cleverest of all. He starts his advertisement out by advising all to drink a glass of "real hot water" before breakfast. He expatiates for a quarter of a column upon the value of hot water. Then down at the end of the advertisement under the guise of a news article he explains that each glass should contain one teaspoonful of ordinary limestone phosphate and that a quarter pound may be obtained at any drug store.

The advertisement in the first place is deceptive. It pretends to be prescribing hot water when in reality that is just a cloak for the patent cure-all device. And the advice to take such a laxative every morning is positively injurious. Ask your old family doctor. Ask some new physician just out of medical college. Ask anyone who knows the human system and they will all agree.

There are other nostrums of the same type and all are equally dangerous. If their makers would advertise them as laxatives they would be perfectly legitimate but it seems that the proprietary medicine fakers are not content with having folks take their dope once a week or so. They want it taken daily. What do they care for your health. They want your dollars and the more frequently you take their dope the more frequently will you spend your money. It's a mercenary and a souless game.

While on this subject of laxatives we wish to pay our respects to George H. Mayr, the "chemist" who concocts and dispenses Mayr's "wonderful remedy." This is being advertised just now in the Salt Lake and other Utah city and town newspapers.

Mayr's "great remedy" is indeed wonderful for it cures gall stones. But the peculiar part of it is that Mayr's remedy makes these gall stones. The facts are, according to authentic analyses now in the offices of the Utah State Food department, that the supposed "gall stones" removed by this remedy are not gall stones at all—they are just lumps of soap that are formed from too-large doses of oil followed by salts. Now the analyses show that Mayr's remedy is composed of the following:

- No. 1.—Rochelle and Epsom salts.
- No. 2.—Rochelle salts.
- No. 3.—Peanut or olive oil.

You can form your own conclusions as to the alleged gall stones that the Mayr company has got so many wonderful testimonials for removing. Chemical tests have proved that such gall stones are formed by the alkaline intestinal fluids acting on the large amount of oil taken and these, having been formed, are washed from the body by the Rochelle and Epsom salts. The state food department has records of these tests for the benefit of any who may want to call and verify this statement.

Yet Mayr's cure is of the cure-all variety. It states that it is like no other. That is probably true. But why take the "wonderful stomach remedy" at such a high price and create gall stones merely to remove them. Small quantities of olive or other oils are good for one. Small doses of salts are good for one once in a while. But olive oil is fairly cheap and you get a whole box of salts for a dime.

The common individual finds it difficult sometimes to believe that there really are so many fakers in the world. The ordinary man or woman is honest and inclined to think others so; at least to give them the benefit of the doubt. But such should be warned again to give medical advertisements of the cure-all variety and fake specialists a wide berth and the benefit of nothing. It is especially fatal to give them the benefit of one's pocketbook and that is the principal benefit they are after.

For instance we have before us the photograph of "Dr." G. L. Harrison Salt Lake City. Dr. Harrison was recently convicted of false advertising and practicing medicine without a license and was released on his promise to leave town. So far, it is understood, he hasn't left the city and the police are now looking for him.

He advertised to cure everything from rheumatism to blindness but investigation showed him to be a suffer from dropsy—one of the ailments

he advertised to be able to cure. The state food department had him convicted under the false advertising law. This department would prosecute these other fakers but most of them have headquarters outside the state. For that reason we are doing the next best thing—exposing their graft and false statements.

The best advice to all is to get plenty of fresh air, sunshine, exercise and good food and chew the latter well. Stay away from the nostrums and give nature a chance. She will make you well and keep you well and not exact one cent of toll.

### NEW BULLETIN ON FIELD PEAS.

A new circular on field peas is soon to be available for free distribution by the Idaho Experiment Station. This circular is published by the Station to meet the increasing demand for information regarding the culture of field peas.

The following are mentioned in the circular as some of the important uses of the crop:

1. Seed may be used for feed.
2. The crop is profitable to grow for seed.
3. Where peas are mixed with small grain, the crop may be used as a hay or silage crop.
4. Field peas can be profitably used as a crop to hog off.
5. When grown in a rotation, they add fertility to the soil and are an excellent crop to grow on the summer fallow.

The crop has not been grown extensively over the state on account of the scarcity and high price of seed and lack of acquaintance with its varied uses as a field crop.

The following factors are mentioned as necessary in order to obtain a satisfactory yield:

The planting of a desirable variety for seed as Blue Prussian, Bangalia, or Kaiser.

Where a crop of peas for forage is desired, White Canada or White Colorado are recommended.

The seed should be planted very early as the time of planting greatly affects the yield.

If the crop is grown on ground for the first time, the seed should be inoculated.

The bulletin describes all the above subjects more in detail and also discusses the harvesting and threshing of the crop. Those desiring more information on the subject of Field Peas should write to Experiment Station, Moscow, Idaho, for Circular on Field Peas.

### PURE BRED STOCK PAYS

That it pays to raise good stock is illustrated by the experience of two Utah ranchmen who sent their steers to the same market on the same day. Both ran their stock on National Forest range under grazing permits, both used the same amount of range per head of stock, and both paid the same grazing fee. One gave close attention to the selection of his breeding cows and used only high-grade bulls. The other made no effort to improve his herd. The owner of the high-grade stock received \$40 per head more for his steers than the owner of the common stock.

Some of the stockmen club together, and buy high-grade bulls which are owned as community property. Naturally there is a desire to encourage the use of good breeding stock and to eliminate the scrubs. In



# CALKO DIP

(STANDARDIZED)

AN

**INSECTICIDE & DISINFECTANT  
FOR  
CATTLE SHEEP HOGS POULTRY  
AND**

To be used for disinfecting barns, chicken coops, corrals, hog pens, out-houses and etc.

**One Gallon Calko Dip Makes  
From 50 to 100 gallons disinfectant.**

## Calko Hog Powders

IS A

**HOG CONDITIONER AND  
WORM EXPELLER**

Don't feed Worms.  
Save your Hogs.

—25 lb. sack (delivered parcel post) \$2.00  
—50 lb. sack (delivered freight) \$3.50

**CALLISTER-KORTH CO.**  
McIntyre Bldg., Salt Lake City, Ut.

# VICO

Automobile  
OIL



YOU can't prove a good thing until you try it. Clean out your crank case and refill it with the right consistency of "VICO." The trial requires but little work and will be the means of convincing you of the perfectness of this oil for lubricating your car in this climate. Our booklet, sent FREE on request, will tell you which consistency of "VICO" will correctly lubricate your car.

**Utah Oil Refining Co.**  
Refiners  
Salt Lake



**"EVERY  
DROP  
COUNTS"**

Resources over  
\$6,500,000.

Large loans are easily made by a bank with facilities such as this. We will be glad to discuss your requirements with you.

## Walker Brothers Bankers

SALT LAKE CITY

Founded 1859  
Oldest Intermountain Bank





## Investigate This

### UINTA BASIN LAND

We are agents for government and privately owned lands in all parts of this basin.

We have any number of propositions that it will pay you to investigate.

**GET IN ON ONE OF OUR EXCURSIONS**

**AND SEE FOR YOURSELF**

To properly show this section we are running regular excursions to the basin at a very liberal expense. Several of these have already been run with very gratifying results.

These excursions will continue throughout the season.

Get in on one of these and get an early selection before the best is gone.

**WRITE US TODAY**


or see us for information.

**DUCHESNE LAND CO.**

WALTER ROMNEY, Agt.

336 Main Street

Salt Lake City, Utah



## ERUCTION

Blocks wheels and takes profits.

# MICA


## AXLE GREASE

Kills friction and makes profits.

Dealers everywhere.

**THE CONTINENTAL OIL CO.**

(A Colorado Corporation)



## Is The Hog Extinct

By Earl Bennion

Any one reading our farm papers or attending our round-ups the past season would think so. All writers and speakers have successfully dodged the hog question. Why? We all know why, but is it a good reason? Supposing we eliminate all discussion of potatoes and potato growing when potatoes are worth less than 50 cent per cwt. We would be mum every two or three years. Supposing we quit talking egg production through the 4 or 5 months of the year that eggs are worth less than 20 cents per dozen. Why do you know that some men thought the hog never would come back?

Henry Fessenmyer is noted today for being the greatest active improver of The Big Type Poland China's. The author purchased some breeding stock from him and in one of his letters of correspondence he gives this advise which illustrates what I tried to infer in the first paragraph, and also illustrates that an education is not necessary but only helpful in making a successful man. He says, quoting him exactly, "Now Mr. Bennion let me give you a little advise if you want to be a successful breeder you must stick to the hog business through thick and thin if you do not you will sel out when pigs are lo and by when pigs ar hy." Mr. Fassenmyer needs no apology for such grammer or spelling need I for dis-closing it for if we could breed hogs like Henry Fessenmyer we would willingly spell worse than that.

Well, what does it mean? It means that Mr. Fessenmyer unconsciously "handed us all one straight from the shoulder." There is in the West an army of men arrayed against the hog as great as the hosts of Germany. The only difference as I can see is that we use hammers and the Germans use guns but one is as deadly a weapon as the other if you strike hard enough. Ask a successful potato grower what he thinks of his business and he will tell you its alright but that you've got to stay in the game every year. Ask a successful apple grower, a successful sheep man a successful grain grower and they will all tell you the same story. I predict that next year will see more farmers growing potatoes and fewer farmers running hogs than were before i. e. per capita farmer, and what do you think, the price of these commodities will be next year? Its a reflection that we have not more business foresight.

And what effect does it have on the few hogs that are left. All these men that have been damming the hog have likewise been under feeding and neglecting him, and I may say some who have not been damming him.

Why do you know, that I saw last week two or three herds of pure breds that it would take an evolutionist to tell what there original (three years back) ancestors were like. Stock that when I first saw them 4 or 5 years ago were big four and five hundred pound type animals now 100 to 125 pound scrubs.

Now just a word of modification so that my readers won't think I'm too harsh of course, I know the question that is uppermost in your minds is "Whats the use of raising hogs when there is not a house that can handle our product?" You're right. We must be conservation until we

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#### SALT LAKE

get a packing house. But we must get a packing house. If we ourselves and our institutions and papers would work as hard to get a packing house as we and they did to get us to raising hogs two or three years ago we would soon have one.

Why do you know that while we have been accepting the highest bids we could get during the last two months which was 7 cents on foot, Chicago and Omaha have not paid less than 9 cents on foot and have twice topped the market at better than ten. Of course we had reason to be "down in the dumps" last fall and winter. Why all the time the East were getting 7 cents on foot, we could not sell ours at all. It is not right. Our hams and bacon cost more per pound here than any where in the East. If we ship a car of hogs to Omaha they ship us back the cured pork. Sheep men complain that if they could cut down the freight on lambs the profits would be enormous. If they could ship the dressed lamb instead of the live one the freight would be cut about in six.

Gentlemen we must have a packing house. Lets all boost, push and fight for one. And let the other moral be this, that if we are going to be hog raisers let's stay in the game every year.

**CALK WOUND**

Koosharem, Utah.

Utah Farmer:

Gentlemen:—I have an animal which calked itself on the pastron about midway between the ankle and hoof.

The pastron is now so enlarged that it looks like a ringbone. If you will recommend a remedy for this I shall thank you and appreciate it very much. Yours respectfully,

Alma Sorenson.

Answered by Dr. H. J. Frederick.

Where an animal calks itself the wound should be looked after at once,

because this condition is very often difficult to overcome. The wound should be washed out with a good antiseptic, carbolic acid or creoline in about a 2 per cent solution. The hair should be clipped away from the edges of the wound so that it will not irritate it and then after it is thoroughly cleansed a drying powder consisting of boric and tanic acid and iodoform is equal parts should be applied. In a good many instances it is well to apply cotton over this and bandage in order to keep it absolutely clean. Where it has been enlarging for some length of time as you describe, it may be necessary to clip the hair from the enlarged part and apply a blister. For this purpose you might use red iodide of mercury one part, cantharides one part, vaseline eight parts. Mix together and apply to the affected part by brisk rubbing. Some times the inflammation can be overcome by applying hot applications to the affected part. In any event it is essential to look after a wound of this kind as soon as possible after it happens.

**HANDS ONE TO TEACHER.**

Mother, to little boy after his first day at school: "Well, Tommy dear, what did you learn today?"

Tommy: "Didn't learn anything."

Mother: "What did you do, then,"

Tommy: "Didn't do anything."

Mother: "But, my child, you must have had a lesson of some kind."

Tommy: "Well, I might as well tell you, I'm disgusted with school. The teacher, a great big lady, doesn't know as much as I do. She had to ask me how to spell cat and dog. I don't believe I'll go any more."

"My father persuaded me to take a course in domestic science."

"And how do you like the course?"

"Well, it looks like ordinary kitchen work to me. If my suspicions are confirmed I shall drop the course and make father buy me a \$50 hat."





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Established - - - - - 1904

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When will we learn one of the greatest lessons in farming, to have enough livestock on the farm to eat up all the feed stuff we produce. Market your crops on four legs rather than four wheels.

We are pleased to learn that a large number of farmers in different parts of the state are getting together and organizing. If you will work for the benefit of all, much good will result from your organizations.

Not every farm or farmer is suited to dairying as a single occupation. It is a good side line however, on nearly every farm. It brings in a monthly pay check. Good dairy cows are a source of profit and help keep up the soil fertility.

According to a very careful study made by government men, a cow that will not yield \$60.00 or more a year is a liability and the larger the herd of such cows the less profits will come from that farm. It will depend where the cow is as the cost of feeding and care will change some with different localities.

A poor fence is only an aggravation. It is an annoyance to you and the neighbors. Look to your fences at this time of the year. The loss of an animal or damages done to growing crops will more than pay for the cost of repair or even a new fence. Build only good serviceable fences.

Plant some trees, along the driveway on the edge of the farm. Plant shrubs and flowers around the home.

If you have not already cleaned up around your home do so at once. For your own protection, from disease and the deadly fly, clean up and do not allow any breeding place for the fly to remain around your home or farm. Don't let the fly get any start at this time of the year. For the protection of the man who does clean up his place the health officers should see that everyone does their part towards making a general clean up this spring.

This week we would like to emphasize the importance of the poultry business. In Utah we have many natural advantages favorable to poultry raising, but we do not, however, produce enough poultry products for our own use. Raising poultry today is quite different to that of a few years ago. Conditions have changed, we have new problems to meet. People who read and keep up with the business are quite successful. One must like chickens and be willing to do a great deal of work, for much depends upon the little details in this business. Many are making a success of it as a side line, along with other work. There is money in the poultry business if you do it right.

#### DON'T PLAY WITH FIRE

The season will soon be here when the danger from fire will be increased. A fire is easy to control at the start but after it gains headway it defies man's efforts and at times lays waste what it has taken years to accumulate. The property loss from fire each year is enormous. Much of this loss could be prevented if we were more careful. Children are often to blame for the cause of a fire. Do parents teach their children that fire is a dangerous plaything? No one should play with fire. In making bon fires are we careful enough as to size and place? Much care and thought should be given at all times so as to prevent the possibility of a fire no matter how small.

#### PRICE OF FARM LANDS.

According to reports given out by the U. S. Department of Agriculture, the prices of farm land has risen rapidly within the last 15 years. Has our farm revenue increased in the same proportion? Unless some very careful cultivation and fertilization has been going on our land will be less productive today than it was a few years ago.

To make farming pay on high priced lands, better farming is necessary—and better farming is largely a matter of education—this education may be obtained by practical experience, or going to school for a few years. In either event, it must be a continual mental growth, meeting new problems and overcoming new conditions.

If the price of land continues to advance, we must keep ahead of these advances with our ability to produce better returns.

#### ONE BREED IN A COMMUNITY.

The idea of having only one breed of livestock in a community is working out very successfully in a number of places. There are a number of advantages in connection with this idea. Whether it is dairy or beef cattle, it is a sure way of securing a better grade of registered bulls, and

#### DR. WIDTSOE'S WEEKLY MESSAGE.

##### THE LITTLE HEN

The flock of hens, usually cared for by the woman on the farm, seems a small item to the man who cultivates broad acres. Yet, how many farm women, and men for that matter, can testify that the willing hen furnishes much of the store groceries, the children's clothing and most of the little spending money that the farm wife has at her disposal. A prominent farmer, the owner of a large farm, a fine city home and other good things, declared the other day that the poultry on his city lot cancelled the grocery bill for his household which is a fair size. A farm woman asserted that her savings from the flock of poultry during ten years, now well invested, was sufficient to support her in her old age, and at present was enabling her to secure many small luxuries beyond the means of her husband who was yet building up the farm. Many similar experiences might be cited.

Yet, poultry is usually only an incident on the farm, a minor issue, maintained as much for pleasure as for profit. It is often true that the little things yield relatively the largest returns; and in the new agriculture that we are building, the economics of rural life will give proper place to the little, well paying side issues that help the farmer to greater independence. The wise business man does not despise the small block of well paying stock, simply because his holding is small. He values it on the basis of the profits it returns. So with the hen; she should be held in high financial esteem.

It were well if the flock of farm poultry were more generally found and more diligently improved and cared for on Utah farms. The city man also could profitably maintain his little flock, if he could resist the temptation to make poultry keeping his sole business.

To make poultry culture a man's sole pursuit requires probably as much capital as any other farm pursuit; it also demands much information and practical skill. Those who like the business and have qualified themselves to make it their main concern should by all means undertake it, but for the many, poultry is of chief value as one of the little things that give variety to work, furnish pleasure and at the same time pay well for the investment made.

It is well for a family to keep a small flock of hens. It gives pleasure; it furnishes information; it stimulates the feeling for nature that the care of living things alone can develop and it adds to the income. Fewer cats and more hens might not be a bad slogan for thousands of household in this State.

more interest seems to be taken in the development of the particular kind of livestock that is being bred in a certain locality.

Buyers are always more readily attracted to a locality of this kind when they wish to purchase pure bred stock, and the community can work together better in selling and advertising, and can thus reduce the expense to a minimum.

There is a growing inclination to adopt one breed in a community.



## POULTRY SUCCESS

A Labor of Love—A Thinker—  
A Worker.

(Continued from page 3)

cannot acquire a love for poultry breeding, as all men do not possess the proper physical basis for prosecuting the work, and as all men do not possess the poultry mind, so all men cannot hope to succeed in this fascinating pursuit. Fortunately, many men possess these qualifications, though in differing degrees, and the poultry industry is not likely to fail for want of qualified workers. Success will vary with the varying degrees of qualifications for the work, but even a modest success is success. Any man who loves fowls and is willing to show his love in a practical way by contributing to their comfort, provided he is willing to read, study and observe, may hope in time for a reasonable degree of success, for his natural qualifications will develop through use, and his aptitude grow greater with experience.

To all such the poultry industry extends a cordial invitation to join the growing throng of the successful. But to those who belong in the doubtful class, who have admiration which does not amount to much, but which may possibly develop into love for poultry breeding, the poultry industry utters a word of caution: Begin small; keep a few fowls and rear a few chickens. If you find pleasure and success in so doing, add to your plan and stock, little by little, and so continue until you have experimentally demonstrated your fitness or unfitness for the business.

There is no need, of course, to be fussy, finicky, or to waste time over unnecessary trifles. The main point is to be observant, careful and not let things slide, but, when anything is noticed, to attend thereto immediately and not get into that fatal habit of putting matters off until a more convenient occasion presents itself, when, by the way, it may be too late. So cultivate the faculty, fellow breeders, if you would be successful.

## THRUSH

Utah Farmer:

Dear Sir:—Answer through the columns of your paper the cure for "Thrush." I also have a horse that is subject to Colic and stoppage of his water, quite frequently. Is there anyway I can prevent these attacks.

Respectfully,  
Wm. E. Gailey.

Answered by Dr. H. J. Frederick.

Thrush is an affection of the foot and is very often caused as the result of allowing the animal to stand in filth. Germs very often work on the soft parts of the foot or frog and sole often penetrating up into the sensitive structures causing a foul smelling discharge. This should be cleaned thoroughly with soap and water and a good disinfectant. See to it that the clefts of the foot around the frog are well opened up and disinfected as described. If this does not overcome the trouble we sometimes use powdered calomel. Put it into these clefts and then cover it all with a small piece of cotton to keep it in place. This usually dries up the condition and overcomes the trouble.

Where an animal has colic as you describe it is usually due to irregular or improper feeding or watering. Such animals usually get a change of feed

and this very often brings on this trouble. Also where an animal is worked out of the ordinary this may cause indigestion and as a result colic would ensue. If you will see to it that your animal is fed regularly and judiciously, not given large quantities at one time and very small

amounts at other times and water it regularly with good water, I doubt that you will have very much trouble. Be careful and do not feed too much bulky material. Most of our horses are allowed too much alfalfa hay and this is very often responsible for conditions of this kind.

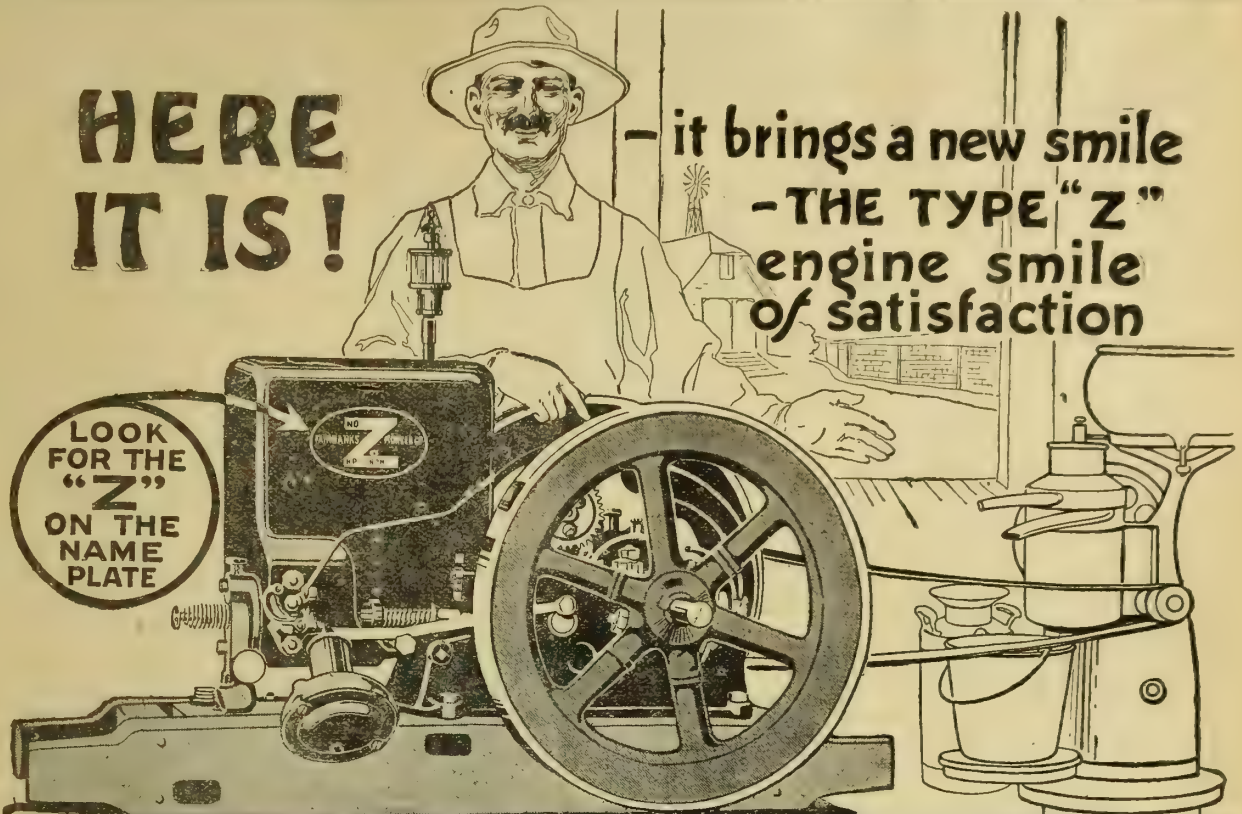
REFUSED TO COMMIT HIMSELF.

"Do you love your teacher my little man?" asked the school director visiting the primary room.

"G'wn!", replied the small boy. "Do youse tink I am goin' to tell youse all about me love affairs?"

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## Salt For Cattle

Tests show that the old practice of salting the cows once a week, though based merely on observation, is a good one. Cattle need to be supplied with salt, and where plenty is given, feeding it once a week is sufficient.

It was once thought that salt increased the digestibility of food. Proof was obtained later that it neither hinders nor aids the process of digestion, unless to slightly decrease the breaking down of protein. Kellner believes, however, that liberal supplies of salt have a physiological function as a stimulant to digestion, and that it increases palatability. He states that its chief effect on digestion comes in preventing digestive disturbances.

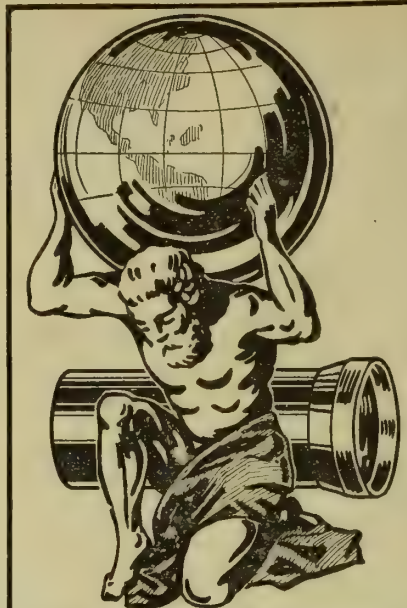
It appears that salt is at least of great value to the ration. To determine the effect of completely cutting off the supply the Wisconsin station kept dairy cows on a full ration except that no salt was given, in some cases more than a year. The following is a summary of results obtained: In every case the cows exhibited an abnormal appetite for salt after having been deprived of it for two or three weeks, but in no case did the health of the animal, as shown by the general appearance, the live weight or the yield of milk, appear to be much affected until a much longer period of time had elapsed. The period of immunity varied with individual cows from less than a month to more than a year. There was finally reached a condition of low vitality in which a sudden and complete breakdown occurred. This period was marked by loss of appetite, a general haggard appearance, lusterless eyes, a rough coat, and a very rapid decline in both live weight and yield of milk.

This experiment shows that salt must be supplied. The amount required for different cows varies. It varies also with different feeds and in different localities. Grasses grown on soil containing large amounts of chlorine are apt to supply relatively large amounts of salt. Cattle eating these grasses require less extra salt. Babcock, of the Wisconsin station, concluded that under average conditions three-fourth ounce per day per 1000 pounds live weight is sufficient, and that six-tenths ounce should be added for each twenty pounds of milk produced.

Cattle should be prevented from eating too much salt, as large quantities greatly increase the amount of water thrown off in the urine. This results in an abnormal thirst, the animal drinks too much water and the digestive system is thrown out of order. If water is not of easy access the large amounts of water thrown off leave the body with too low a water content, which injures digestion, and perhaps the body tissues.

The best plan to follow seems to be to supply salt liberally at all times. Some feeders prefer placing large pieces of rock salt in the pasture. A barrel of salt covered to keep off the rain with part of one side sawed out furnishes a good source of salt.

The addition of science to the practice of salting once a week is the caution to supply liberal quantities. Where a weekly trip may have to be omitted once in a while it is best to place a salt supply in the pasture.—I H.



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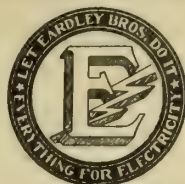
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## Clean Seed Potato Pro- duction Under Irrigation

The problem of securing healthy seed potatoes is one of great importance in the irrigated west. Potato growers of Utah and Idaho are warned by specialists of the U. S. Department of Agriculture that potatoes grown in the east or in foreign countries are no healthier than those grown on their own irrigated tracts and that there is always the danger of introducing new diseases by planting imported seed potatoes.

Seed potatoes should be grown at home in a specially selected seed plot. Land which has never been planted to potatoes but which has for several years been under cultivation with alfalfa or grain is apparently best adapted for growing healthy seed potatoes. Raw desert land should be avoided as it is not well adapted to potato growing until it has first been in cultivation with other crops, especially leguminous crops and grains. The seed selected for such a seed plot should be wholly free from disease. This can be accomplished in the following manner: Select from your seed potatoes tubers which show no external evidence of disease such as russet or Rhizoctonia scab, common scab or decays. Tubers having small pockets of storage dry rot may be used provided the decayed portion is cut out. No trace of the decay should remain. Tubers externally free from evidence of disease should then be cut into seed pieces. The first cut should

be made across the stem end. The stem-end portion should always be discarded. If there is any deep discoloration at the stem-end, the entire tuber should be discarded; but if apparently healthy, the rest may be cut into seed pieces of the desired size. After cutting, the selected seed stock should be treated by soaking for 2 hours in a solution of corrosive sublimate. The formula for making the corrosive sublimate dip is as follows: To each 30 gallons of water add 4 ounces of corrosive sublimate which has first been dissolved in a little hot water. In making and using the solution, only wooden, glass or porcelain vessels should be employed. Corrosive sublimate is a deadly poison and both the solution and the potatoes treated should be kept out of reach of farm stock.

The seed plot should be given the best possible care, as potatoes poorly cared for are apparently more susceptible to disease attacks than those which are given the best opportunity to grow and mature. Potatoes selected and planted in this manner should give a product comparatively free from disease, though it must be admitted that the planting of disease-free seed on new land is not a guarantee of a disease-free product. A diseased product will mean that the land is infected and that other land should be used for the seed plot another year.

Let the young folks help make plans for next season, they are interested in the business.

Have some real "better farming" literature around the homes; if you don't profit by it the young people will; be progressive.

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## RELIABLE FARM BARGAINS

Talk to any of our customers and see how they are suited with the farms they have bought from us.

160 acres, 8-room house, good barn, water rights from the Bear River Canal, very best of water for domestic purposes. First class beet land. On County road. A farm that will pay for itself in a very short time. \$125 per acre on very good terms.

300 acres of good dry farm land in the Bear River Valley. Railroad station on the place. All under the Bear River Canal and can be irrigated if necessary. A great sacrifice. \$20.00 per acre, ten years to pay with 10 per cent down.

16¼ acres of land and a 5-room pressed brick house, with large sleeping porch; city water piped into house; electric lights; located on main road on 16th South and 8th East. Good barn, garage, granary and other outbuildings; ½ acre family orchard. This is one of the nicest places in the Southeast part of Salt Lake County. It can be had on your own terms at only \$6000.

80 acres in Cache Valley with 8-room brick house; good outbuildings and orchard; spring water piped to the house. Under irrigation. Will sell for \$62.50 per acre or exchange for Salt Lake City property.

2½ acres on 15th South and 3rd East. \$1275. Very easy terms.  
One acre 16th South and 9th East. \$500. Very easy terms.

We exchange farms for City property.

Phone—Wasatch 963

KIMBALL and RICHARDS

"Land Merchants"

56 and 58 Main Street  
Salt Lake City, Utah.

## Your Dealer Sells "Utah-Idaho"

So great is the demand, and so popular is the brand of Utah-Idaho Sugar, that it may be ordered by name from your dealer; he is sure to have this perfect sugar; every progressive dealer has it in stock.

Housewives have found what a pure, clean, white dependable sugar it is; how well it sweetens foods, and how satisfactory the results are when it is used for cooking, preserving and jelly-making.

Let your dealer know that you are a judge of good things by specifying "UTAH-IDAHO" the next time you order sugar. More economical by the sack.

**UTAH-IDAHO SUGAR**  
ABSOLUTELY PURE

## HOME

### WORK OR CARBOHYDRATES.

The kernel of wheat and the grain of corn and all other foods that are the fruits of grasses contain a food fuel, a carbohydrate, which is neither heavy, nor strong, nor bitter, nor sweet, nor sour, because it has a neutral character rather than some of these positive and limiting characteristics, we can use a great deal of it, and we can combine it agreeably with no end of other foods much more positive in character, neutralizing or extending them so that we can eat more of them. For these and other reasons we use it in any needed bulk.

If we are to do a big day's work with our hands we can profitably take up to twice our usual allotment of carbohydrate, but if we take much more than we need for work it will cause us a great deal of inconvenience sooner or later.

It is a strange thing that the much more complicated food stuff than the fats and carbohydrates, namely, the protein, which is really too expensive for fuel and cannot be all burned up as can the carbohydrate and fat, is given more credit as nutriment than both the others. It is frequently spoken of, wrongly, as the one nutritious food.

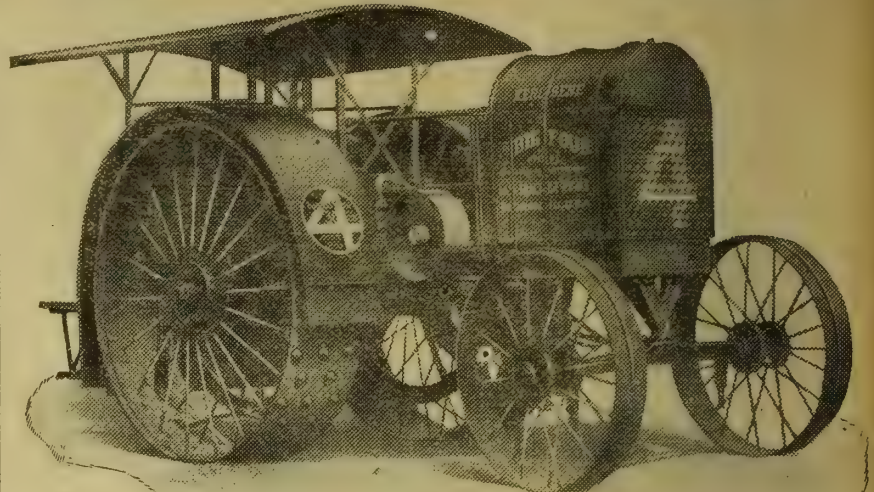
Meat is the great protein food and others are fish, cheese, and eggs. In these cases it is in nature combined with fats, but not with carbohydrates, while the fuel foods all contain some protein making them more complete all round foods than meat. Oatmeal has over 16 per cent protein and wheat 11 per cent.

There is one class of plant foods some of which contain as high as 25 per cent of protein and at the same time are rich in carbohydrate and some of them in fat. These are the legumes, the beans, peas, and lentils. The peanut is a legume containing the three best proportions, in round numbers 38 per cent of fat, 25 per cent protein, and almost 25 per cent carbohydrate. Dried beans have almost 60 per cent of carbohydrate, about 25 per cent of protein, but not 2 per cent of fat. Peas contain even for carbohydrate and a trifle more protein, but not 1 per cent of fat. The protein in these vegetables is not considered as digestible as that of meat.

It is the protein in the legumes that makes them hard to cook by those who have not learned how protein behaves when cooked. The typical protein is the white of egg, which, if cooked with much heat, becomes like leather. The connective tissue of meat is also albuminous, which is another way simply of saying that it is nitrogenous or is protein. If beef or a fowl is boiled hard this albuminous part toughens and then you cannot cook the meat tender though you cook till doomsday and cook it finally to rags.

The scum which rises to the top when peas or beans are boiled is albumin. It should be removed because it is already hard cooked or it would not show. And it is necessary that the cooking thereafter be gentle, or the albumin still in the vegetables will be hardened so as never to soften. The starchy part of the bean will be cooked and eatable, but the whole may give indigestion because of the presence of the hardened albumin.

## The Big Four "30" Tractor



### Light Weight—Four Cylinders—Three Speeds

THE Big Four "30" is used for plowing, harrowing, seeding, harvesting, hauling and road grading. It provides an ideal power for threshing and all kinds of belt work. The Big Four "30" is so designed that it carries a large proportion of its weight directly over the rear axle.

Hyatt Heavy Duty Roller Bearings are provided for every bearing in the transmission.

We will be pleased to send full information on the Big Four "30" to anyone interested.

**MILLER-CAHOON COMPANY**

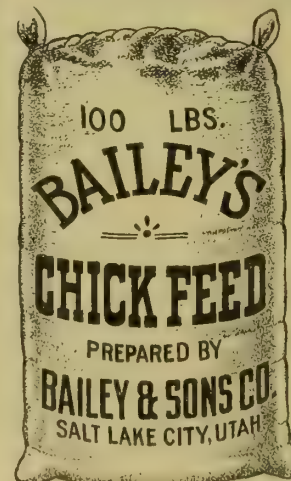
Murray, Utah

Idaho Falls, Idaho

### YOUR CHICKS NEED

## Bailey's Chick Feed

Look for this Bag



Recognized by successful poultrymen as the most satisfactory Dry Food of Baby Chicks.

Send Today for our latest illustrated complete poultry Supply Catalogue.

**BAILEY & SONS CO.**

EVERYTHING IN POULTRY SUPPLIES

**SALT LAKE CITY, UTAH**





For Greatest Satisfaction Use  
**DOUBLE SERVICE**  
**Automobile Tires**  
Guaranteed 7,000 Miles Service  
**Absolutely Punctureproof**

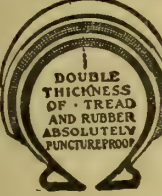
Double Service Tires are made double the thickness of the best standard make tires. This 100% wearing surface naturally gives that much more mileage and service. The average of 12 miles of tough fabric and one inch surface tread rubber makes these tires absolutely punctureproof. These tires excel all others for use in the country over rough and rugged roads as well as on hard pavements. They are as easy riding and resilient as any other pneumatic tire—the air space and pressure being the same. They are the most economical and "care free" tires made and are used where tires must be depended on and tire troubles cannot be tolerated. Many Double Service style tires are in use in the U. S. government and European War service. Our output is limited to a certain amount, but for a short time we offer the following reduced special prices as an introductory offer:

## PRICES

Tires Tubes		Tires Tubes	
30x3 in.	\$8.60 \$2.30	36x4 in.	\$17.45 \$4.65
30x3 1/2 in.	10.85 3.10	36x4 1/2 in.	21.20 6.60
32x3 1/2 in.	12.75 3.20	36x4 3/4 in.	22.60 6.75
33x4 in.	16.75 4.20	37x4 1/2 in.	23.60 6.30
34x4 in.	16.70 4.35	37x5 in.	25.50 6.60

All other sizes not included in above list also furnished. Rebates at 10% additional. Terms: Payment with order at above special prices, a 10% discount allowed on orders for two or more tires. All personal checks must be certified.

Try these tires now and be convinced of their very high qualities. Sold direct to the consumer only. Descriptive folder upon request. Write for it.  
Double Service Tire & Rubber Co., Akron, O.  
Dept.



## SCHOOL LUNCHES

Bab Bell, Missouri A. C.

For that tired feeling try a better diet!

"Don't blame the child who feels lazy during these spring days." He may be undernourished though overfed. The real remedy is to adjust the food to his needs. Nature changes the food of the birds and beasts all about us, and parents should not keep the children on the same winter diet that has now become tiresome as well as unseasonable. "Variety is the spice of life," but "it is easier said than done" you reply.

Here are some definite suggestions which help solve the difficult problem of planning things in the kitchen at this time of the year:

Lunch I.—A bread-and-butter sandwich, 2 cottage cheese sandwiches, a cup of prune whip, nut and raisin cookies, graham crackers, and 2 apples.

Lunch II.—A boiled nam sandwich, 1 plain bread and butter sandwich, 1 jelly sandwich, 1 orange, 1 glass of milk, and some nut and raisin cookies.

Lunch III.—A whole-wheat bread-and-butter sandwich, 2 sandwiches containing nuts cooked, dressing, or lettuce, as available, 1 cup of baked custard, and 2 apples.

Breakfast left overs hastily thrown into a dinner pail do not make good school lunches. The meal prepared for a grown man who works in the field or shop is not best for the child in the school room even after a long walk or hearty play, so the man's breakfast of meat, fried potatoes, fried eggs and coffee is a poor basis for the child's lunch, especially if the child is allowed to add pickles, pastry, and sweets. The eggs, milk, fruit, and vegetables—fresh or canned as the case may be—which may be had so easily in the country will furnish good healthful lunches if properly prepared. Such a diet will do more for the average youngster than all the "spring tonic" on the market.

## ADVERTISING

"Everybody's doing it."

The man who boasts that he doesn't advertise is busy advertising himself when he boasts.

Immediately afterward he feels sold. Which proves that his advertising paid.

Some men advertise on barns and others in newspapers, which are more stable.

If a barn burns down all the advertising is gone, but you can't burn up a whole issue of a newspaper—after it has been distributed.

Some people lie in advertising and some advertise (their own crookedness) by lying.

The advertising of the crooked man pays the honest dealers a little, but if all were honest there would be eventually more trade for all.

Some people reason by label, and when they find an advertiser is a liar they say all advertisers are liars.

So, advertisers, if you know an advertiser who lies, hunt him up and reason with him by means of an elm club.

It doesn't pay to keep an ad standing too long without change. Sampson pried a couple of columns that had been standing a long time, and brought down the house by so doing."—Doorways.

## BIG INCOMES FOR WELL DRILLERS

### \$2500.00 to \$10,000.00 Per Year Clear

If you want to get into a big paying business of your own

and be your own boss, investigate the exceptional opportunity now offered in the Well Drilling Business. Ten times more work to be done than drillers to do it! \$50.00 a day clear profit is what many men are doing with

I clear \$50.00 a day above expenses right along. Thos. Kelly



## Armstrong Well Drilling Machinery

We've been building high-grade drilling machinery for nearly half a century. We've learned how to combine simplicity and durability. And we offer equipment that will drill faster and at a lower cost per foot than any other machinery in existence—machinery that is easiest to operate—that runs quietly—eliminates repair bills—that is always on the job. Our patented Internal Compensating Band Wheel Clutch—a feature that saves all lost motion—is one of the greatest improvements ever found on a drilling machine. Besides saving energy and power, it gives absolute control

ARMSTRONG MFG. CO.

over drilling motion. This and our Friction Hoist, another great trouble and work saver, give operator an easy right-hand control of entire machine, including raising and lowering the derrick by power. Many other equally striking advantages.

Pay for an Armstrong Drill as it pays for itself on our part cash and time payment plan.

Write Today for our big free catalog. Tell all about Armstrong Drilling Machinery and the Well Drilling Business.

508 Chestnut Street, Waterloo, Iowa

## Another summer in a hot kitchen ?

The warm weather months are just beginning.

And THIS summer we should like to have you cook in a cool, comfortable kitchen—an Electrical kitchen!

There is nothing difficult to understand—there is nothing mysterious about the Electric range.

Electric cook stoves embody the results of extended research and practical experience; thousands of housewives in every section of the United States are using Electric ranges more successfully, more economically and with far greater personal comfort and convenience than any other form of cook stove or fuel.

Every source of discomfort and inconvenience has been eliminated with Electric range cooking. Here is FLAMELESS cooking—safe cooking—a cool kitchen—no soot—no ashes—no dirt. The food tastes better and is more nourishing.

Our stock of Electric ranges is complete. Call at the store or telephone and our representative will call.

## UTAH POWER & LIGHT CO.

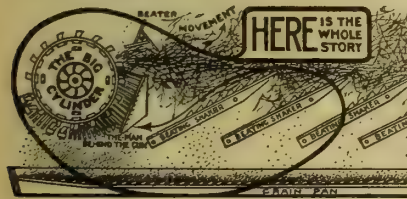
Efficient Public Service

If you are losing 60% of your water through SEEPAGE, which is the average loss in irrigation ditches, use our LENNON Smooth Flume for Ditch Lining. Instead of building dikes to carry water across your low places, use Flume. It will not leak and will pay for itself the first year, by the water it will save you. Made in all sizes. We sell everything for irrigation.



UTAH CORRUGATED CULVERT & FLUME CO.  
Woods Cross, Utah.

## IT WORKS With Every Inch!



## FROM FEEDER TO STACKER THE RED RIVER SPECIAL Is a Practical Threshing Machine

There is no waste of power, there is no waste of grain, there is no loss of motion, there is no mass of unnecessary parts that lumber up the work.

## It Is Built to Separate Grain

And it does this and does it just as fast and just as well as it can be done with simple efficiency and with compound economy. It is the one supreme machine for its class of work. This supremacy has been gained by sixty-eight years of constant improvement upon the one great idea of minding your own business.

## You Get RESULTS That Way

Good friends of yours are making money and saving grain by using this machine. They tell you how they do it in the Home Edition of the Red River Special paper. You'd better send in your address for a copy of the last edition. If you would like a Big Catalog, just mention it when you write.

**NICHOLS & SHEPARD CO.**  
(In Continuous Business Since 1848)  
BUILDERS EXCLUSIVELY OF  
**THRASHING MACHINERY**  
Red River Special Threshers, Feeders, Wind Stackers  
Steam and Oil-Gas Traction Engines  
(2) BATTLE CREEK, - MICHIGAN

Mention Utah Farmer when you write.



## Rearing Chickens

### Poultry Specialists Offer Suggestions for Brooding and Feeding Young Chicks.

Brooding with hens is the simplest and easiest way to raise a few chickens and is the method which is used almost exclusively on the average farm. Artificial brooders are necessary where winter or very early chickens are raised, where only Leghorns or other nonsitting breeds of poultry are kept, or where large numbers of chickens are raised commercially. Sitting hens should be confined to slightly darkened nests at hatching time and not disturbed unless they step on or pick their chickens when hatching. The eggshells and any eggs which have not hatched should be removed as soon as the hatching is over. Hens should be fed as soon as possible after the eggs are hatched, as feeding tends to keep them quiet; otherwise many hens will leave the nest. In most cases it is best that the hen remain on the nest and brood the chick for at least 24 hours after the hatching is over. All the chickens should be toe-punched or otherwise marked before they are transferred to the brooder or brood coop, so that their age and breeding can be readily determined after they are matured.

Hens will brood successfully 10 to 15 chicks early in the breeding season, and 18 to 25 in warm weather, depending upon the size of the hen. Powder the hen with a good insect powder before moving her and the chicks to the brood coop. The hen should be dusted every two weeks or as often as necessary until the chickens are weaned. If lice become thick on the chickens, or if they are troubled with "head lice," a very little grease, such as lard or vaseline, may be applied with the fingers on the head, neck, under the wings, and around the vent.

Brood coops should be made so that they can be closed at night, to keep out cats, rats, and other animals, and enough ventilation should be allowed so that the hen and chicks will have plenty of fresh air. The hen should be confined in the coop until the chickens are weaned, while the chickens are allowed free range after they are a few days old.

The brood coop should be cleaned at least once a week and kept free from mites. If mites are found in the coop, it should be thoroughly cleaned and sprayed with kerosene oil or crude petroleum. From 1 to 2 inches of sand or dry dirt or a thin layer of straw or fine hay should be spread on the floor of the coop. Brood coops should be moved weekly to fresh ground, preferably where there is new grass. Shade is very essential in rearing chickens, especially during warm weather; therefore, the coops should be placed in the shade whenever possible.

Chicks are usually left in the incubator from 24 to 36 hours after hatching, without feeding, before they are removed to the brooder, which should have been in operation for a day or two at the proper temperature for receiving the chickens. A beginner should try his brooding system carefully before he uses it. After placing the chickens in the brooder they can be given feed and water. Subsequent loss in chickens is frequently due to chilling received while taking them from the incubator to the brooder. They should be moved in a covered

basket or receptacle in cool or cold weather.

The capacity of brooders and hovers is often overestimated, and one-half to two-thirds of the number of chickens commonly advised will do much better than a larger number. The danger from fire, due frequently to carelessness and lack of attention, is considerable in cheap brooders and hovers, while there is some risk in the best grades, although proper care will reduce this to a minimum. Individual hovers in colony houses or several in in one large house are giving quite general satisfaction on small poultry farms, while the pipe system of brooding is commonly used in large commercial poultry plants and where extensive winter brooding is done. Gasoline brooders, brooder stoves burning engine-distillate oil, and a separate individual hover heated by a coal fire are coming into more general use, each with a capacity varying from 200 to 1,500 chickens. These large individual brooders are used in colony houses, and when the chickens are weaned the colony house is used as a growing coop, which requires a smaller investment than the long, piped brooder house and allows one to rear the chicks on range to good advantage.

The best temperature at which to keep a brooder or hover depends upon the position of the thermometer, the style of the hover, the age of the chickens, and the weather conditions. Aim to keep the chickens comfortable. As the operator learns by the actions of the chickens the amount of heat they require, he can discard the thermometer if he desires. When too cold they will crowd together and try to get nearer the heat. It is impossible to state for each case at what temperature the brooders should be kept to raise young chickens; however, it will run from 90 degrees up to 100 degrees in some cases, as some broods of chickens seem to require more heat than others, an average being 93 degrees to 95 degrees for the first week or 10 days, when the temperature is gradually reduced to 85 degrees for the following 10 days, and then lowered to 70 degrees or 75 degrees for as long as the chickens need heat.

Young chickens should be fed from three to five times daily, depending upon one's experience in feeding. The young chicks may be fed any time after they are 36 to 48 hours old, whether they are with a hen or in a brooder. The first feed may contain either hard-boiled eggs, johnnycake, stale bread, pinhead oatmeal, or rolled oats, which feeds or combinations may be used with good results. Feed the bread crumbs, rolled oats, or johnnycake mixtures, moistened with water, five times daily for the first week, then gradually substitute for one or two feeds of the mixture finely cracked grains of equal parts weight of cracked wheat, finely cracked corn, and pinhead oatmeal or hulled oats, to which about 5 per cent of cracked peas or broken rice and 2 per cent of charcoal, millet, or rape seed may be added. A commercial chick feed may be substituted if desired. The above ration can be fed until the chicks are two weeks old, when they should be fed on grain and a dry or wet mash mixture.

## It took 301½ days

of the hardest kind of service to wear out this pair of

## Goodrich "HIPRESS"

### —The Rubber Boots and Shoes

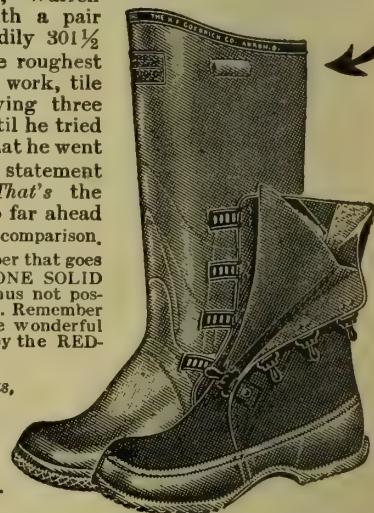
"With the Red-Line 'round the top"

We've been giving you actual instances of the remarkable superiority of the MOLDED RED-LINE Rubber Footwear. Here's another that came to us recently. Willard Crane, of Martel, Warren county, Ohio, started in February with a pair of "HIPRESS" and wore them steadily 301½ days before they would give in. The roughest usage imaginable—concreting, railroad work, tile ditching, etc. Said he had been buying three pairs of boots a year for ten years until he tried "HIPRESS." He is so enthusiastic that he went before a notary and made the above statement under oath, sending us a copy. That's the service "HIPRESS" is giving—it is so far ahead of the ordinary boot and shoe that there is no comparison. "HIPRESS" is made of the same tough rubber that goes into Goodrich Auto Tires—MOLDED INTO ONE SOLID PIECE! Weakness of the hand-made boot thus not possible—they'll outwear anything on the market. Remember—Goodrich is the only concern making these wonderful boots and shoes—you can tell the genuine by the RED-LINE 'ROUND THE TOP.

Come in all styles—short boots, hip boots, pacs, arctics, etc.

**The B. F. Goodrich Company**  
AKRON, OHIO

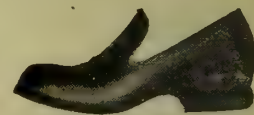
Makers of the Celebrated Goodrich Automobile Tires—"Best in the Long Run"



When you buy Rubber Overshoes insist on the genuine Goodrich-made

## "STRAIGHT-LINE"

for best fit—longest wear



After the chicks are 10 days old a good growing mash, composed of two parts by weight of bran, two parts by weight of bran, two parts middlings, one part cornmeal, one part low-grade wheat flour or red-dog flour, an 10 per cent sifted beef scrap, may be placed in a hopper and left before them at all times. As soon as the chickens will eat the whole wheat, cracked corn, and other grains, the small size chick feed can be eliminated.

Fine charcoal, grit, osyster shell, and clean water should be kept before the chickens at all times, and cracked or ground bone may be fed where the chickens are kept in small bare yards, but the latter feed is not necessary for chickens that have a good range.

### INCUBATOR DIRECTIONS

H. L. Kempster, Missouri A. C.

Place the egg on its side—not on end.

Clean the incubator at the end of the hatch.

Fill the lamp and trim the wick regularly every morning.

Always run the thermometer at 102 degrees F. at the top of the eggs.

Turn the eggs twice a day from the fourth day to the eighteenth day.

Remove all "clear" and dead eggs after testing on the seventh day.

Run the incubator for twenty-four

hours so as to be sure that it is properly regulated.

Disinfect the incubator at the end of each hatch. Never fill a machine without disinfecting.

Use good vigorous breeding stock. Remember that a weak chick, in most cases can be traced to poor breeding stock.

When replacing the lamp do not turn the flame as high as when lamp was removed. This will prevent flame from creeping up and smoking.

Close incubator door on the eighteenth day and if possible, do not open it again until the hatch is completed. Do not chill the chick.

Remove oil from the lamp at the close of hatch. Do not put lamp inside incubator. Do not replace in heater unless it has been thoroughly cleaned.

If the nursery tray is below 96 degrees F. do not let the chicks into it. Remove them to a warm place. A cold nursery tray is no place for a wet chick.

Place the incubator in a cool room, where the sun's rays cannot strike the machine. The room should be even in temperature and be supplied with fresh air, but no drafts.

Select fresh eggs of medium size. Do not use round, pointed, thin, or thick shelled eggs—or those which are wrinkled or have bumps. Remem-



ber that the large eggs produce the large chicks.

To adjust the thermostat, change screw so that the disk raises at a lower or higher temperature, as desired. On most machines to screw down lowers the temperatures, and to unscrew raises it.

Remove the eggs twice a day to let fresh air get through the shell to the chick within—for five minutes during the second week, and ten minutes during the third, but never chill them. During the first week they get enough air while being turned.

Weigh the eggs at setting and at the end of each week. If they decrease in weight more than five per cent per week the chick will be small and have tough, leathery membranes because there has been too much ventilation. If the weight of eggs decreases less than five per cent the chick is too large and the contents of the shell are watery.

These are the methods which have given best results at the Missouri College of Agriculture. They are for use in all incubators and are not restricted to any one of the incubators in use at that College.

#### HOW TO SECURE SOME PURE SEED.

Seth Jenkins.

The value of pure-bred seeds is greatly underestimated by many farmers. Any farmer can improve his grains seed at a little cost. Many years of experimentation have shown

that seed grain adapted to conditions under which it is growing will increase crop yield very materially over common or unimproved seed.

A few dollars spent for pure-bred, improved seed grain will be sufficient to grow enough seed to plant several acres the following year. This improved seed should be put in a plot by itself or at one end of the regular field. Care should be taken in harvesting to see that it is kept separate from the rest of the grain. If the main field is growing a different variety, it is well to put this seed in a plot by itself. The seed-bed should be well-prepared and clean. When harvested, the grain should be well shocked and capped to avoid damage by the weather. This will insure seed grain of higher quantity and stronger germination.

The next year, the seed produced on this pure-bred seed plot may be used in the general fields and in two seasons' time the farmer can be growing purebred grain. This kind of grain, thoroughly cleaned, treated for smut and grown on clean land, will enlarge the yield and improve the quality of the small-grain crop, and a larger crop will be obtained at little increase in the cost of production. The sale of pure-bred grain for seed will make a profitable side-line, too.

Right now is the time to decide to do some work along this line. For a little effort you can put your farm on a pure-bred basis.

#### DISINFECT OATS

Many farmers haven't been accustomed to disinfecting their oats before planting. It has been a custom for years to treat wheat, but the oats have been neglected.

Oat smut was very prevalent in some sections last year and no one knows when proper weather conditions will cause the smut spores to thrive in any community. It is better to practice safety first. The smut spores rest over during the winter in the grain and unless killed by treatment will develop a smut plant when the kernel begins to sprout in the spring. Every farmer knows just what the smut plant does to his grain. It not only destroys a high percentage of his crop but it also infects his seed oats for next year.

Treat your oats with formalin. 1 pint to 40 gallons. Place the solution in a barrel and dip your oats in it until they are thoroughly soaked. After the treatment cover them with sacks or blankets for 4 or 5 hours to keep the formalin from evaporating too quickly.

The Sunday School teacher was talking to her pupils on patience. She explained her topic carefully, and, as an aid to understanding, she gave each pupil a card bearing a picture of a boy fishing.

"Even pleasure," she said, "requires the exercise of patience. See the boy fishing; he must sit and wait and wait. He must be patient."

Having treated the subject very fully, she began with the simplest, most practical question:

"And now, can any little boy tell me what we need most when we go fishing?"

The answer was quickly shouted with one voice: "Bait!"—American Boy.

See that the brood sow is given plenty of clean water.

#### THE UNCARED FOR DOG.

Dr. H. J. Frederick of the Utah Agricultural College says that the uncared for dog should be done away with. A roaming dog spreads hog cholera from farm to farm in infected districts. The recent outbreak of foot and mouth disease in the Middle West was carried to hundreds of farms by dogs. Rabies are carried almost exclusively by them and other diseases such as tuberculosis, contagious abortion, blackleg, anthrax and chicken cholera may be spread by dogs.

This is not all the bacterial diseases they carry but they are sufficient to show that the roaming dog should be killed.

The dog also carries all kinds of parasites. The tick, the flea, the mange, and unless he is washed regularly two or three times a week some of these parasites can usually be found on him. He carries the Rocky Mountain Spotted Fever tick which causes the spotted fever. A number of cases are in the State now. Besides the parasites in his hair he carries tape worms in his alimentary tract and certain kinds may infect man and all domestic animals especially sheep and horses.

A dog is a good dog only as long as he stays at home. When he begins to wander he becomes a nuisance and a source of danger to his owner and to others.

#### MONEY IN TURKEYS.

(Continued from page 3)

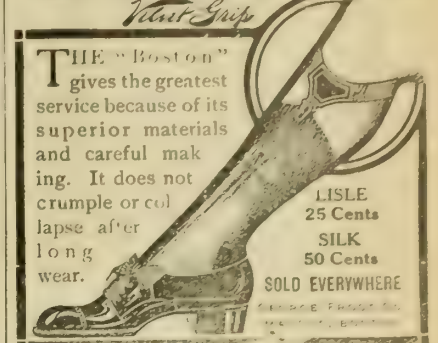
enemies of young poults. To prevent their getting a foothold, dust the hen thoroughly with some good lice powder before she is placed on the nest and once a week thereafter while she is sitting. The nesting material should be kept clean, and if the eggs become dirty they should be washed with lukewarm water.

#### Brooding.

If the weather is warm and dry no shelter is required, as the poults do better in the open. Should it be rainy, however, they need to be protected, for nothing is more injurious than for them to become wet and chilled. The most satisfactory plan is to confine the mother turkey hen to a coop and allow the poults to run in and out whenever rain does not prevent. This coop should be placed in a field where they can run out and find grasshoppers, green vegetation, and other feed. The coop should be moved to fresh ground every day.

Improper feeding, combined with close confinement, has been the cause of many failures in turkey raising. Given free range on the average farm, the poults can easily pick up their own living, and one light feed a day for the purpose of inducing them to come in at night is sufficient. If the mother hen is confined to a coop and the poults allowed to run in and out, three times a day is often enough to feed and very little should be given at a time. The poults should always be ready to eat; if given all they will clean up several times a day, indigestion will be the result. If there is little or no feed outside the coop for poults to pick up, then they should be fed about five times a day, feeding only a small quantity at a time. A good feed for the first few days is stale bread soaked in milk and squeezed dry. Corn bread crumbs and clabbered milk or cottage

# Boston Garter



## The Salt Lake Cabinet and Fixture Co., Inc.

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Bank, Office and Store Fixtures

Fine Cabinet Work

32 Richards Street

Salt Lake City



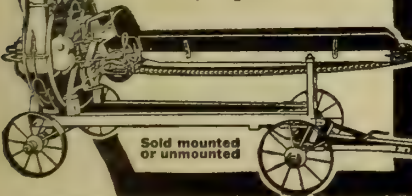
## Start now to choose your silo filler

Losses were very heavy last fall among farmers who depended upon somebody else's cutter, and couldn't get it when needed the worst. Others lost big because their cutters broke down at the critical time. The

## BLIZZARD Ensilage Cutter

is the dependable machine for the farmer—because so simple, safe and easy running. Small engines plenty powerful enough. Unlimited cutting and elevating capacity. Fills the world's largest silos as easily as twenty-footers. Self-feed table saves one man. Repair cost very little. Many still giving good service after ten and fifteen years of use. Talk with us about an ensilage cutter now. Drop in for a catalog, at least.

Intermountain Concrete Co., Ogden, Utah.



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**WILKES** THEATRE  
ON STATE ST.  
ERNEST WILKES STOCK CO.

Highest Class Royalty Plays

NEW BILL EVERY SUNDAY

Matinees Thursday and Saturday

Evenings 15-25-35-50c  
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VIA LOS ANGELES and rail or steamer

**\$40.** 00 TO SAN DIEGO or SAN FRANCISCO and return

ON SALE DAILY beginning MAY 1st.

Liberal Limits and Stopovers  
BEAUTIFUL SAN DIEGO EXPOSITION

OPEN ALL YEAR

J. H. Manderfield A. G. P. A.  
10 E., 3rd South St.  
Salt Lake City, Utah.



cheese is also quite often fed and with excellent results. Green feed and grit should be on hand at all times. As the poults grow older, the ration should gradually be changed to grain.

Give the dairy cows the usual feed of hay and grain night and morning until the pastures are luxuriant.



## POULTRY

### PREPAREDNESS IN

#### POULTRY KEEPING

F. W. Kazmeier, Poultry Husbandman, Agricultural College of Texas.

Of course we believe in "preparedness." Farmers and poultry raisers should prepare for next year's crop of poultry. If they do not, they may have good cause to regret it later.

### KEEP THE RATS AWAY

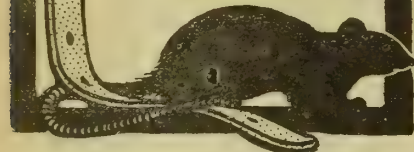
Rodents will not touch harness that is treated with

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THE CONTINENTAL OIL CO.  
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### Bog Spavin or Thoroughpin

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and you work the horse same time. Does not blister or remove the hair. \$2.00 per bottle, delivered. Will tell you more if you write. Book 4 M free. ABSORBINE, JR., the antiseptic liniment for mankind, reduces Varicose Veins, Ruptured Muscles or Ligaments, Enlarged Glands, Wens, Cysts. Allays pain quickly. Price \$1 and \$2 a bottle at druggists or delivered. Made in the U. S. A. by W. F. YOUNG, P.D.F., 142 Temple St., Springfield, Mass.

### THERE IS NO DIFFERENCE

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AMALGAMATED SUGAR CO.  
OGDEN, UTAH.

Breed from nothing but healthful, vigorous and constitutionally strong stock.

In selecting eggs for hatching remember that a small egg will hatch a small chick that will be weak, hard to raise and unprofitable when mature. Incubate only good sized eggs, weighing not less than 2 oz. each and of a color characteristic of the breed. Abnormally large or small eggs should not be hatched.

Do not hatch any eggs older than ten days. The fresher the eggs the better they hatch and the stronger the chicks. When saving eggs for incubation keep them in a temperature as close to 58 degrees to 60 degrees as possible. Keep them covered and in a fairly damp place. Do not wash hatching eggs.

When the eggs-for-hatching are purchased it is advisable to dip them into a 92 per cent solution of alcohol or in a 2 per cent or 3 per cent solution of some standard disinfectant like Kreso or Zeso of Zenoleum because sometimes disease germs adhere to the outside of the shell.

Dust the hen with some good lice powder before placing the eggs under her. Repeat a week later and again if necessary. Watch the hen, nest and nesting material for lice and mites.

The number of eggs to be placed under a hen depends on her size and the season of the year. The usual number a medium sized hen can comfortably cover in the natural season is fifteen. During very warm weather this hen perhaps could cover seventeen eggs. If possible set two hens at the same time and give all chicks hatched to one hen.

The best feed for a setting hen is whole corn, fresh water and grit. Provide these in such a way that she can get to them at will.

Watch the hen as much as possible, because frequently things happen that require attention. As soon as chicks are all hatched, dry and lively, grease them on head and neck with common lard. This kills the lice that may be upon them. Repeat this about once a week. Watch your chicks carefully for lice and mites.

The best incubator is the one that hatches the largest number of strong chicks. Some incubators hatch a large number of chicks, but they are weak and hard to raise.

After you have selected your machine, uncrated and set up, the next thing to do is place it level in all directions. Heat it up gradually. Start with a small flame. Use good kerosene. Operate the machine at least two days before placing any eggs in it. It is good practice to operate the machine empty until it is fully under the control of the operator. Place the machine in a room with a uniform temperature and plenty of fresh air without strong currents of air passing directly over or close to the machine. A room with a cement or ground floor is the best. This makes it possible to flood the floor once a day. This has been found very satisfactory. The first two or three days keep the temperature rather low say 101 degrees to 101½ degrees, then raise the temperature to 103 degrees and keep it there as nearly as possible until the 19th, 20th and 21st day, when it is advisable to allow the temperature to run up to 104 degrees to 105 degrees, but never higher. Keep the temperature as uniform as possible.



## Vogeler's Perfect Chick Food

Our chick food is a perfect balanced ration, contains ten varieties of grains and seeds, it means early development of the pullets and early marketing of the cockerels, its feeding means life insurance to the chicks and big profit to the poultry raiser. Buy by the sack, 100 pounds \$3.00. Order a sack today and make money out of the poultry business.

## Vogeler Seed Co.

SALT LAKE CITY

OPENED JAN. 1ST, 1913



"The HOTEL that's BEST  
In all the WEST"

WHEN IN LOS ANGELES

STOP at the NEW  
FIRE PROOF

**HOTEL NORTHERN** EUROPEAN  
200 OUTSIDE ROOMS  
150 WITH BATH  
420 W. 2ND ST. NEAR HILL  
NORTHERN HOTEL CO., PROP.  
FRANK L. CRAMPTON, MGR.  
RATES \$1.00 PER DAY AND UP

**Big Money in Running Water**

Let us start you in a business that will make you from \$15 to \$50 a day when farm work is slack. Other men have done it for years with an

**Improved Powers Combined Well Boring and Drilling Machine**

Same rig bores through any soil at rate of 100 ft. in 10 hours, and drills through rock. One team hauls and operates machine. Engine power if wanted. Easy to operate—no experts needed.

**Small investment; easy terms. Make machine pay for itself in a few weeks work.**

There is a big demand for wells to water stock and for irrigation. Write for free illustrated circulars showing different styles

**Lisle Manufacturing Co.**  
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**AGENTS! WAKE UP!**

**Make \$30 to \$60 Weekly**

Selling our new and unequalled Lanterns, Portables, Hollow Wire Systems and Gasoline Devices for Lighting City and Rural Homes, Stores, Halls, Churches. Most Powerful Light Known.

**WE LOAN YOU SAMPLES**

Absolutely safe. More brilliant and many times cheaper than gas or electricity. Guaranteed five years. Everyone a possible customer. Send for free illustrated catalog. Large commissions. Exclusive territory free.

WRITE TODAY  
**SUNSHINE LIGHT CO.**  
SALT LAKE CITY, UTAH

Follow directions coming with the machine. Handle eggs with clean hands. Turn eggs twice a day from morning of 3rd day to evening of 18th day. Study the ventilation of machine. Watch the lamp very carefully and inspect carefully the last thing before retiring. At hatching time, keep the incubator door closed. If a glass door, darken the interior by hanging black cloth or paper over it, do not allow the chicks to pant. If they pant increase the ventilation.

When you answer advertisements, tell them you saw it in Utah Farmer.



# THE FARMERS' MARKET PLACE

**For the Buyer**

This market place offers our subscribers and readers a very good place to advertise. If you have something to sell or want to buy here is the place to tell it. These advertisements are read because they offer bargains, your bargain should be here. Take advantage of this opportunity today.

**For the Seller**

## Gem Herd of Improved Chester White Swine.

This Herd Bred, Raised and Sold. Both Boar and Sow Grand Champions of the World's Fair held at Frisco this last year. Both Sire and Dam, is still in the herd. If such breeding interests you, write for illustrated catalogue. Stock of all ages for sale at all times.

Address

**GEO. H. LAWSHE**

Falls City

Idaho

## CHERRY CREEK DAIRY FARM OFFERS YOUNG BULLS

### FOR SALE

Herd Sires: Rag Apple Korn-dyke 13th, Grand Champion Utah State Fair 1915. Sire Ray Apple Korndyke. Dam Fairview Mabel Korndyke. A. R. O. record as a Jr. 3 year old 25.51, Bt 4.83 fat. Rag Apple Valerie. Sire Rag Apple Korndyke 13th, Dam, Princess Valerie. A. R. O. record 23.00 Bt from A. R. O. Dams.

**NELSON BROS. Props.**

Richmond

Utah

## HOLSTEIN BULLS FOR SALE

Sons of Wachusett Creamelle George the 2nd whos daughters have made from 350 to 500 pounds of butter fat a year just with ordinary care. Wachusett was 2nd prize aged bull at the State Fair last fall and all of his get were first in their class but one. His dam gave 105 pounds of milk in a day that tested better than 4 per cent. No. 1 Iowana George 3rd a fine 18 months old son of Iowana Colanath Alberkerk. A high testing heifer from Iowana Farms, Iowa, her dam has a 19 pound record. This young bull was Junior Champion at the State Fair. The first check for \$200 takes him. No. 2 Wachusett Beauty a 12 month old son of Maudeline Of Beechwood Beauty with a 23 pound butter fat record, milk test 4.6. She is a full cousin to Colanath 4ths Johana, \$150 buys this one. Take no chances, get a bull from a proven sire and one that has produced the goods. Offer several others from 6 months to 1 year old from \$75 to \$125 each.

**J. W. STUBBS**

Charleston

Utah

Mention Utah Farmer when you write.

## BUTTER WRAPPERS

We carry a large stock of the Best Vegetable Parchment Butter Wrappers and Especially Prepared Ink for Printing the same. We furnish them Postage Prepaid at the following Prices money to accompany order.

100	.....	\$ .90
200	.....	\$1.25
500	.....	\$2.00
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Send all orders to

**THE UTAH FARMER**  
LEHI, UTAH

## IF YOU WANT A BARGAIN "SEE ME."

100 acres good land under Strawberry valley irrigating project, only 2 1/2 miles from Payson sugar factory, fine proposition for beets and general farming, only \$7500. Terms or take city property at right figure.

320-acre well improved ranch, fine 9-room modern brick residence, one 6-room house, one 4-room house, large barn, extra fine springs (would make good summer resort), good water right, independent electric light plant, land adjoining held at \$150 per acre, located one mile from good town in Sanpete county, first-class stock and dairy proposition; all implements and some stock go with place; improvements alone cost over \$20,000. For quick sale only \$25,000—\$7000 cash, balance reasonable, or might take first class real estate at cash value.

**GEO. W. DANLEY**

Was. 2989. 707 Walker Bank Bldg.  
SALT LAKE CITY

## Money to Loan

On improved farms with primary water rights, at reasonable rates.

Quick Service.

We lend our own funds.

**INTER-MOUNTAIN LIFE INSURANCE CO.**

Home Office

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## EGG MACHINES.

Our Leghorns are truly worthy of the name. Hardy Laying Paying strains. We are offering the biggest chick bargain of the season—try us and be convinced. Ask for circular. **MANTI MAMMOTH HATCHERY CO.** Mantl. Utah.

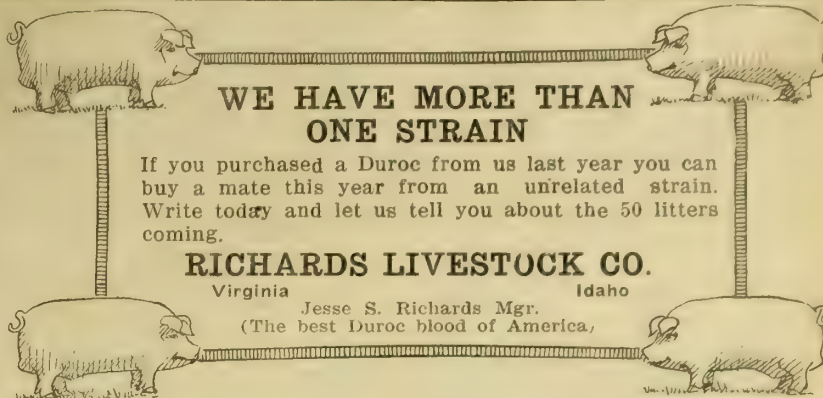
## LOW PRICED LANDS.

Good Dry-Farm Lands with Surface and Artesian Water available at short depths. Close to good thriving Towns and easy access to Railroads. 160 to 640 acre tracts, \$500 to \$1500 per tract—\$1 to \$9 per acre. I can conscientiously recommend them. They are the best bargains in this State. They must sell quick. Write to

**J. W. PAXMAN**

Nephi

Utah



**WE HAVE MORE THAN ONE STRAIN**

If you purchased a Duroc from us last year you can buy a mate this year from an unrelated strain. Write today and let us tell you about the 50 litters coming.

**RICHARDS LIVESTOCK CO.**  
Virginia Jesse S. Richards Mgr. Idaho  
(The best Duroc blood of America.)

**BABY CHICKS & HATCHING EGGS**  
White Leghorns, Brown Leghorns, Barred Rocks, R. I. Reds, Black Minorcas, Anconas, Buff and White Orphingtons. Prices on application.

**THE ORLAND HATCHERY**  
Orland, Glenn Co. California

**4—BEST LAYING STRAINS—4**  
Rose Comb Rhode Island Reds and White Wyandottes, Single Comb Black Minorcas and White Leghorns. Egg fertility and stock guaranteed. Write your wants. E. C. Blanpied, Box 60, Milford Utah.

## DAY OLD CHICKS

From our own S. C. White Leghorns, selected as layers from stock "bred to lay" for four generations. Eggs for hatching from these and S. C. R. I. Reds. Book orders now. Bates and Sons, Provo, Utah, R. F. D. No. 1—Box 310. Breeders of Airedale Dogs. Write us.

## BABY CHICKS

Single Comb White Leghorns. The kind that pay for five or six years. Especially bred for long profitable service. Send for booklet. Early orders insure your wants.

**MOUND VIEW FARM**

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**HOUSE AND BARN PLAN BOOK FREE**—Gives direct from-mill prices on many designs. Send us your carpenter's bill for quick estimate. Western Lumber and Millwork Company, Tacoma, Washington.

## BOURBON RED TURKEY EGGS

At rate of 3 for a \$1.00 or 10 for \$3.00. Order from this ad.

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Utah

## WE MAKE

Farm and Ranch Loans in Utah, Idaho, Wyoming, Oregon and Colorado.

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## UTAH HATCHED WHITE LEGHORN BABY CHICKS \$11.00 PER 100

Circulars, order-blanks, etc., upon request. Candee Colony Brooders carried in stock.

**GLENWOOD EGG FARM**

R. D. 3 Murray, Utah

## EGGS FOR HATCHING

Pure bred Black Minorca and Buff Orpington. Splendid laying strains. \$1.00 for 15; \$5.00 per 100. Mrs. P. Maher, 633 Seventh Street, Ogden, Utah.

## FOR SALE CHEAP

The Golden Glow Farm 320 acres best quality land in the heart of Gem Valley. Four miles west of Alexander, Idaho, five miles Northwest of Grace, Idaho, 1 1/2 miles from \$10,000.00 school house and church, 3 miles from railroad. 35 acres in hay with excellent water right. Balance in grain and summer fallowed. The best improved farm in the country. Free from frost. Buy direct and cut out the middle man's commission. Write or call on C. A. LLOYD, Alexander, Idaho.

## THE CACKLE OF A HEN.

Listen for the cackle of your hens. It has a money value to you.

Plan for the cackle, feed the hens in accordance with the demands of nature as propounded by the experts who have spent their life in the work.

If the cackle is not heard with sufficient frequency ask yourself why. Dig down and study the subject, for the more you study the oftener the hen will cackle, and cackling means more eggs and a bigger bank account.

It is the law of nature that a hen should lay, and cackle. She should lay often and do much cackling, for that, too, is nature's law.

But she will not lay unless she receives proper food and care, and therein lies the wisdom of the man who thinks before he acts.

Get hold of some good literature read up on the subject of egg production, apply the knowledge you thus obtain and in the end you will learn to experience a keen delight in every cackle of your hens.

Your hen wants to cackle—she will cackle, if you give her a chance.

And there's money in the cackle of a hen.—Colorado Agricultural College.

## WAR NEWS.

"James seems to be going all to pieces since he got married. I never saw such a change."

"Well that's not surprising. I understand he gets blown up nearly every day."



## Eggs From Incubators

Use Them at Home or for Chick Feed  
—When Marketed They Tend to  
Lower Prices.

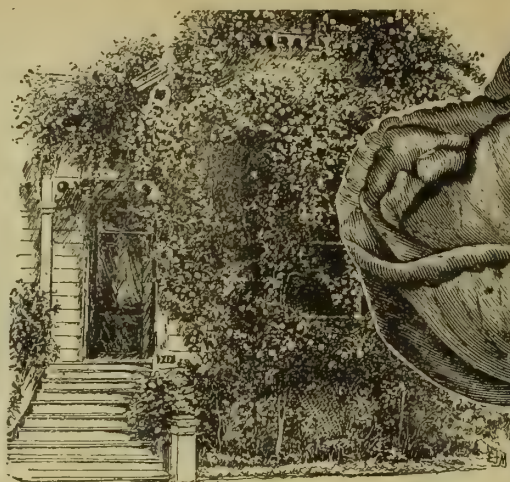
The mixing of eggs taken from incubators with other eggs sent to market, as the practice has grown from year to year, has tended to lower the average prices offered for spring eggs by cold-storage packers, who are important buyers at this season. Spring shipments of eggs, free from incubator eggs, are of such good quality that packers do not have to go to the extra cost of candling each egg before storing it. Such eggs can be "clicked," three at a time, to detect cracks, and quality is determined by the fresh powdery look of the shell. These measures, however, will not detect eggs which have been incubated and failed to hatch and which are useless for storage purposes, because, even if not actually rotten when stored, they soon become so.

When the egg packers are forced to candle, they quickly determine accurately the average number of incubator eggs to the case from the different collecting points and regulate their prices accordingly. In final analysis, therefore, the country shipper is paid on the average for just what he ships to the wholesale center, and he in turn bases his payment to the producer on his own returns.

The eggs removed from an incubator because they are infertile, while not fit after such heating for keeping and not good for boiling or poaching, may, if used at once, be fried, and good for cake and certain other baked foods. Such infertile eggs, moreover, make one of the best feeds for early chicks, and many poultrymen use all their infertile eggs from incubators for this purpose. The farmer, therefore, would be wise to use such eggs immediately at home and not to fix them with his spring eggs. He should send only fresh eggs to market and should try to sell to the country collector, or store, on a strict quality basis. Incubator eggs when they reach market are classified as "low grade No. 2," and the presence of any number of them in a case reacts unfavorably on the grading of the entire 30 dozen, at the hands of the first wholesaler.

### BEWARE OF TURNIP RAPE SEED

Two Hundred Thousand pounds of this seed has been imported from Argentina and Japan, and is being sold as winter rape. The Agricultural Department of the United States has sent out a warning against the purchase of this seed. The Turnip Rape seeds are small, and have a more deeply pitted surface than those of the winter rape. The young plants are easily distinguished by the difference in habit of growth and the character and color of the leaves. Winter rape produces a definite stem with the leaves occurring along it at intervals. Turnip rape does not produce a definite stem, the leaves all growing in an apparent whorl at the surface of the ground. The leaves of winter rape are thick and succulent, free from hairs, and covered with a greyish bloom. The leaves of turnip rape are thin, hairy and bright green like those of the garden turnip.



## THIS AMERICAN QUEEN

COLLECTION OF THE  
MOST BEAUTIFUL

## ROSES FREE

To All Readers of  
Utah  
Farmer

WE BELIEVE in beautifying our homes and surroundings so that they will be a pleasant place to live. Nothing adds more to the beautifying of the Farm Home than fragrant flowers and the Rose is Queen of Flowers. Here's a Wonderful Bargain Offer we have been able to obtain for our friends—and that's you.



# 8

## Hardy Ever-Blooming Roses

### The Kind That Grow and Bloom

To each reader of the Utah Farmer, we want to deliver this collection of eight hardy ever-blooming rose bushes. Every lover of beautiful flowers should send us their order at once as these roses are the kind that bloom every month of the growing season, producing great masses of large double flowers from early spring, until late fall. They possess all the good qualities of vigorous growth, delicious fragrance, beautiful color and fascinating form.

We enclose with each collection special printed instructions on the planting and care of roses and guarantee them to reach you in healthy growing condition. We will deliver them at the proper time to plant in your garden.

This choice collection of Roses consist of such beautiful varieties as Etoile De France, My Maryland, Bessie Brown, Etoile De Lyon, Helen Gould, Gruss Teplitz, Ulrich Brunner, La France, Kaiserin Augusta Victoria. A choice variety of colors and some of the finest roses grown.

## Our Splendid Offer

Send us \$1.00 for a years subscription to the Utah Farmer and we will deliver the entire collection of eight Hardy Ever-Blooming Roses to your post office address positively free. Don't delay but send your order today. These roses are what is known as dormant and can be planted at any time during the next 3 or 4 weeks.

Any old subscriber can take advantage of this offer by paying one year in advance. If you are paid in advance and want this beautiful collection of roses send us one dollar and we will send roses and have time of your subscription extended accordingly.

Send today for this beautiful collection of ever-blooming roses to the UTAH FARMER, Lehi, Utah.



# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region

OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE

VOLUME XII; No. 40

LEHI AND SALT LAKE CITY, UTAH

MAY 6, 1916

## Our Fertile Fields

Nowhere can you find more fertile lands than in the "Valleys of the Mountains."

Nature seems to have blessed us with a combination of elements that make our farms productive.



## The Irrigation Canal

Many changes have taken place during the last few years in our methods of building canals. They are now built so that the water is measured out to each subdivision or lateral.

We are learning the duty of water.

The right amount of water at the proper time is one of the important things in irrigation.



## Questions and Answers

### HEAVES OR ROARER

Teasdale, Utah.

Utah Farmer:

I have a mare weighing about 1250 pounds, she breathes hard all the time, and when she eats she snorts and wheezes.

I have often wondered if she hasn't got growths in her nose, which prevents her from breathing. She was not always that way.

I also have a mare weighing about 100 pounds, she had the distemper last February. She was in good condition before she had the distemper. While she had it and every since she would not eat good. She acts awfully weak. She has a small colt foaled on the 8th of April, it is not very large for its age. We feed the mare all the hay she can eat, four quarts of oats a day, and a pan full of carrots and potatoes cut up.

Please answer these questions in your next issue if possible.

Vernon L. Snow.

Answered by Dr. H. J. Frederick

From your description it is probable that your animal is affected with heaves or it may be a roarer. This latter is an affection of the larynx due to a paralysis of that organ. Again, it may be probable that there are false growths in the nostrils. In any event, it will be necessary to examine the animal to determine definitely what the trouble is and thereby remove the cause. If it is possible for you to call in a competent veterinarian I would advise you so doing in order that he may advise you regarding this. Where an animal is affected with distemper it sometimes leaves it with a constitutional weakness, which may be the case with your animal. It will be necessary to determine the cause of the trouble if it is from distemper. A good tonic to use consists of the following:

Nux Vomica.....1 dram  
Copperice ..... 2 drams  
Salt Petre.....2 drams

This is mixed together and given on the grain daily for about five or six days. This should tone up and stimulate the animal so that it will eat better. It would be well to have the animal's teeth examined to determine if there are any irregularities causing trouble from that source. If there is anything wrong with the mouth or the teeth, this should first be overcome. Then, I believe you will have a very little, if any, further trouble.

### DISTEMPER

Junction, Utah.

Utah Farmer:

Gentlemen:—Will you answer in your next issue and tell me what is the best thing to do for a horse that I have. He had distemper last May and it left him with a hard lump under his jaw. Answer and oblige.

G. C. L.

Answered by Dr. H. J. Frederick.

Where a horse is affected, as you describe, with a lump under his throat as a sequence of distemper, I would advise applying the following:

Red iodide of mercury.....1 part  
Cantharides .....1 part  
Vaseline .....8 parts

This is mixed together and thoroughly rubbed into the enlargement. This is allowed to remain in place for a couple days and is

then washed with soap and water and a little oil or vaseline applied. If this does not overcome the trouble, a second application may be made in from five to six days.

### ENLARGED THYMUS GLAND.

LaSal, Utah.

Utah Farmer:

I have a colt that was folded with a lump about the size of a marble on it. It is located just back of the jawbone on its neck. The lump seems to be soft. What would you advise for a treatment? Thanking you in advance.

Ray Somerville.

Answered by Dr. H. J. Frederick.

The thymus gland develops and is found during late foetal life and for a few months after birth. This later disappears. The thymus gland is located at the entrance of the chest, and sometimes a chain with lobes at intervals of from six to twelve inches apart is found along the neck up to the throat. These are sometimes abnormally enlarged, but

usually disappear a few weeks to months after birth. They should not interfere in any way with the animal.

### CARE OF THE MARE AND

#### FOAL AT FOALING TIME

Regular exercise should be given mares in foal up to the foaling time, but experience proves that heavy pulling, jerking, backing and deep mud should be avoided.

Alfalfa, timothy, and clover are excellent roughages for a mare in foal. Oats and bran are very practical concentrates to feed them when heavy in foal, but one half of the grain ration should be cut down when it becomes apparent that a mare will foal within forty eight hours. Shortly after the mare has foaled a drink of luke warm water should be given her. The same ration fed prior to foaling is usually satisfactory after foaling.

A mare should foal in a dry well lighted and bedded box stall or in a clean grass lot. The box stall should be cleaned and disinfected with a 5 percent solution of carbolic acid be-

fore she enters it. A light covering of air slaked lime on the floor underneath the bedding is a practical safeguard against "navel" trouble. As a preventative of navel and joint disease in the foal, saturate its navel as soon as possible with a 5 per cent solution of lysol or other disinfectant. To prevent blistering the colt's belly smear the parts at the base of the navel cord with vaseline or unsalted lard before applying the disinfectant.

Enthusiasm is what you need. Unless you have it you are only marking time in the business world. Lack of progress is equivalent to loss of ground. No one stands still. He goes either forward or backward. Enthusiasm is the power that will send you over the steepest hills of discouragement.—Eastern Dealer.

Good water is a necessity at all times in the poultry yard, and don't forget the loose, dry earth for the dust bath.

## MUSIC MAKES THE HOME LIFE PLEASANT

### LEARN PIANO ORGAN VOICE VIOLIN DRAMATIC ART OR BAND INSTRUCTION BY MAIL

HERE IS YOUR CHANCE TO LEARN MUSIC—easily, surely—and with the instruction coming from the best instructors in the west. A good musician is the life of every party or gathering in modern social life.

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Templeton Building, Salt Lake City, Utah

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Our Home Study courses in Piano, Organ, Violin, Vocal, Dramatic Art or Band Instruction, fit you in a short time so that you will surprise yourself beyond your fondest expectations. The cost of any of our courses is very small compared to the extent of the instruction we give you and our terms are reasonable.

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Gentlemen:—Send free, information regarding the course checked. It is understood that I am not obligating myself in any way.

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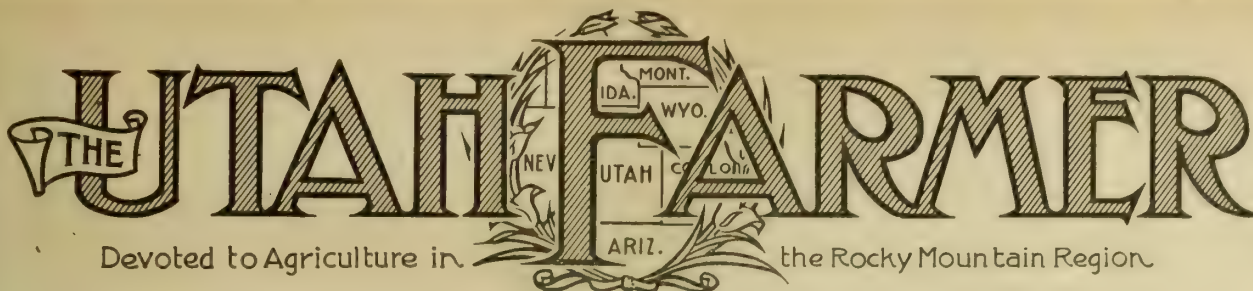
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VOLUME XII.

LEHI, UTAH, SATURDAY, MAY 6, 1916

No. 4

## Reasonable Returns From Walnuts

By L. D. Batchelor, In Charge of Walnut Investigations, University of California, Citrus Experiment Station, Riverside, California.

The following claims have been made concerning English walnuts in certain advertising circulars and elsewhere. A Utah fruit grower has asked for further information on some of the statements made.

Claim No. 1. (a) "Why plant shade trees for shade only when English walnut trees are the cleanest, most valuable ornamental shade tree known? (b) They may live a thousand years and produce \$400 worth of nuts annually, as the Baider Valley tree did. (c) They will grow along the roadsides—in sand, clay or gravelly loams."

Answer No. 1. (a) The English walnut is generally a very satisfactory lawn or street tree. (b) It is quite possible that a walnut tree may live a thousand years, although the writer's attention has never been called to such a tree. The production of the so-called Baider Valley tree, which amounted to \$400 annually, is certainly a rare exception to general or average results. The nuts from this tree may have sold under very extraordinary circumstances or else scion wood from the tree may have been sold for inflated prices. A mature walnut which will produce 200 pounds of nuts annually is far above the average individual, and at 25c per pound, which is the retail price to consumers, this only amounts to \$50. It will be seen that the Baider Valley tree quotation is something very unusual, and thus not in the least to be expected by the average planter. (c) The walnut requires the very best of soil conditions to succeed in the west; it is a waste of money and effort to plant it on shallow, or otherwise poor soil.

C. No. 2. (a) "The consumption of nuts is increasing among all civilized nations today faster than of any other food." (b) The United States is not producing one quarter of the nuts we consume."

A. No. 2 (a) As nearly as can be judged in a general way, the consumption of walnuts is increasing in the United States. The writer is not familiar with the statistics of foreign nations. (b) In 1909 the importation of walnuts into this country, according to the U. S. Department of Agriculture Yearbook, was 26,157,703 pounds. During that same year 22,926,524 pounds were produced in the United States, according to the 1910 census. Take the year 1915 as another example. The California Walnut Growers' Association gives the following figures on the production of walnuts in California and the im-

portation of walnuts into the United States during the past eleven months. It can be seen from these figures that the State of California alone produced



more walnuts during the past year than were imported from foreign sources.

1915 California production 28,600,000 lbs.  
Importation into United States.

April 1915	562,000 lbs.
May	416,000 lbs.
June	23,000 lbs.
July	37,000 lbs.
August	18,000 lbs.
September	80,000 lbs.
October	2,469,000 lbs.
November	7,519,000 lbs.
December	7,489,000 lbs.
January 1916	2,594,000 lbs.
February	724,000 lbs.

21,931,000

Since the census report, the production in this country has increased considerably and the most careful estimates place the production of California, during 1915 for example, at 28,600,000 pounds. The importation during this past year, from all unofficial reports was less than usual. It

(Continued on page 7)

## Results of Two Annual Round-Ups

By I. B. Ball, Chairman.

With posters in stores and on telephone poles, with large banners at cross roads and on the street cars, with full columns in the big dailies of Salt Lake City and in local papers,

seems certain that the success of the affair outstripped the highest hopes of those who conceived the idea of holding it. To have planned such a convention, to have surveyed all its possibilities, to have arranged the program and carried it to a conclusion along such broad lines as marked each days sessions, suggests at once that the organizer of the effort were keenly alive to potentialities the existence of which the average, or better the average citizen would not suspect. We can find no words adequate to a full expression of appreciation that is due the men and women who carried out the vastly instructive program that was arranged for the gatherings. The most flattering approval of the efforts will be expressed when other communities take up similar movements. The convention should stand as a pattern to be followed throughout the state."

The convention movement is being taken up by the high schools of the state. Among those holding such gatherings this year and last year are Jordan, Boxelder, Ogden, Lehi, Spanish Fork and Granite. Of these Jordan ran for five days and Granite for six. The others for two and three and 5 days.

The convention movement at the local high schools is popular among the men and women on the farms and in the homes. The attendance at Granite this year averaged: at the women's department meetings 528, and at the men's department meetings 575. At the general combined sessions the average attendance, besides students of the high school, was 348. The aggregate attendance, outside of students of the school, for the entire six days was 3373. This includes 183 in attendance at evening sessions.

Weather was fair all week, the sky being almost cloudless several days. This cut down the men's attendance, by tempting them to attend farm affairs and repairs that the heavy snows before had prevented. At the same time the fine weather favored the women's attendance, especially those from suburban points reached by our street car lines, as Forest Dale and Farmers Ward. So all things considered we believe our aggregate attendance would have been about the same even had storms prevailed that week.

The scope of the program from day to day was intended to be broad. It administered to the varied interests of the patrons of the school as far as possible. The men's department

(Continued on page 12)

Commenting on the event an editorial in the Saturday News, February 12, 1916 says, "The week now closing has witnessed an activity on the part of progressive citizens in this county that calls for the warmest congratulations. During the past few days a community service convention has been held under the auspices of the Granite High School that must have opened the eyes of all who came in touch with it. It



## DAIRYING

### VARIATIONS IN THE CREAM TEST

C. H. Eckles, Missouri College of Agriculture.

One of the most common cause of dissatisfaction on the part of the man who sells cream on the butterfat basis, rises from variations in the test. This is especially true if each can is tested separately and the best way for the seller to convince himself that the tester is neither careless nor dishonest is to secure a little outfit for himself. A well made, accurate, and satisfactory tester can now be bought for five dollars and its use will not only satisfy the seller that he is getting honest treatment but will enable him to detect the boarders in his herd. The general interest in this subject is compelling the Mis-

souri Agricultural Experiment Station to reprint a circular for general distribution, but a little discussion of the principal causes of variation in this briefer form may avoid the necessity for so wide a distribution of that circular.

**Speed of Separator.**—A change in the speed of the separator immediately causes a change in the tests of the cream, the higher the speed the greater the amount of skim milk thrown out and so the higher the test of the cream secured. Putting it in another way, a low speed results in a larger quantity of thinner cream.

**Rate of Inflow.**—The use of the float does not always insure a uniform flow of milk into the separator, because the faucet may not always be opened equally wide and the flow will be more rapid when the tank is full than when it is nearly empty. Anything which makes the inflow more rapid will increase the proportion of skim milk which goes through, and lower the test of the cream secured.

**Flushing the Bowl.**—The amount of water used in flushing may easily be varied a pint or more and this without any other cause or variation may change the test by two, three, or even four or five per cent.

**Variations in the Milk Itself.**—The milk of an entire herd may raise or fall in its test from day to day because of excitement or change in the weather. If the milk of a herd, whose average test is four per cent, is ordinarily so separated that the cream tests forty per cent fat, the test will suddenly rise to 42.5 per cent if the milk of the herd is suddenly raised to 4.25 per cent without any change in method of separating.

**Cream Screw.**—The test is, of course, readily controlled by means of the cream screw, but as it is seldom changed in this way, on the average farm, there should be no trouble because of variation from this source.

**Feed of the Cow.**—Variations in cream tests are practically never caused by changes in the feed of the cow as every well informed cream seller is now aware.

**Mistakes and Dishonesty.**—Mistakes are most likely to result from carelessness in taking samples, as they must be very carefully and skillfully taken if they are to tell the truth and result in a fair payment, but actual dishonesty is probably much rarer than many sellers believe. A clever thief would manipulate the reported test in such a way as not to arouse the suspicion that an honest report sometimes brings up in the mind of the man who does not consider all the possible hidden causes of variation.

#### THE SIZE OF THE SILO.

The following data is taken from Circular No. 136 of the bureau of animal industry of the U. S. department of agriculture. The data is based on the requirements of dairy cattle, but adjustment may be readily made to suit other needs.

"In determining the size of a silo the first thing to be considered is the diameter, and this depends on the number of cattle to be fed. When the diameter of the silo is too great the silage is not fed rapidly enough to

prevent some of it from spoiling. This is particularly true when the silage is fed in summer. Care should therefore be taken that the diameter of the silo be not too great for the number of cows to be fed from it. The following table shows the least number of dairy cows that should be fed from silos of diameters given:

Diameter of Silo	No. of Cows
10 feet	12
12 feet	17
14 feet	23
16 feet	30
18 feet	38

"From thirty to forty pounds of silage per cow per day should be provided for average dairy cows during the time when no other green feed is available, and the foregoing table is based on this rate of feeding. The amount varies according to the quantity and quality of dry forage used."

#### POOR SEED CORN IN

#### THE STATE.

The Eastern corn crop of last year did not mature as well as it should to give the best germinating results. It will be well for the farmers to test a sample of the corn they wish to plant, for germinating powers. Samples of seed corn used at the Utah Agricultural College in years past have varied from 16 per cent to 98 per cent in their power to germinate. Planting infertile seed is expensive. No farmer can afford to do it when so easy a method of testing their seed is at hand. Place a representative sample of the corn you intend to plant in damp clothes, wet blotting paper or moist sand and let stand for a few days. Every seed that is capable of germination sprouts. Thus you are able to tell the percentage of fertility of your corn and you can determine from this experiment how much seed to plant in order to get a good stand. There are many varieties to plant. No general rule can be given for the selection of a variety that is best suited for all conditions. The growing season of your particular locality must be carefully considered and the variety best suited for those conditions chosen. Some Eastern varieties of corn for silage purposes are giving good satisfaction in the State.

#### BETTER DAIRY STOCK.

Professor Humphrey of the University of Wisconsin gives the following ten commandments for better dairy stock:

1. Treat cows gently and avoid excitement.
2. Be regular in time of milking.
3. Keep stables clean, well-lighted and ventilated.
4. Weigh the milk of each cow at milking time.
5. Get your neighbor to share with you in owning a Babcock Milk Tester, and test the product of each cow.
6. Discard the animals which have failed at the end of the year to pay for their keep.
7. Breed your cows to a pure-bred, registered dairy bull from a family having large and profitable production of butter fat.
8. Raise well the heifer calves from cows, which for one or more generations, have made large and profitable productions of milk and butter fat.
9. Breed heifers to drop their first calves at 24 to 30 months of age. Give



## The Supremacy of the DE LAVAL

#### Supreme in Skimming Efficiency

Over 35 years of experience and thousands of tests and contests the world over have demonstrated the De Laval to be the only thoroughly clean skimming cream separator, under all the varying actual use conditions favorable or unfavorable.

#### Supreme in Construction

This applies to every part of the machine—to the bowl, the driving mechanism, the frame and the tinware. The De Laval Patent Protected Split-Wing Tubular Shaft Feeding Device makes possible greater capacity, cleaner skimming and a heavier cream than can be secured with any other machine.

#### Supreme in Durability

The De Laval is substantially built. The driving mechanism is perfectly oiled and the bowl runs at slow speed, all of which are conducive to durability and the long life of the machine. While the life of other cream separators averages from three to five years, a De Laval will last from fifteen to twenty years.

#### Supreme in Improvements

This has been the greatest factor in De Laval success. Not a year goes by but what some improvement is made in De Laval machines. Some of the best engineers in America and Europe are constantly experimenting and testing new devices and methods, and those which stand the test are adopted.

#### Supreme in Service

With its worldwide organization and with agents and representatives in almost every locality where cows are milked, no stone is left unturned by the De Laval Company to insure that every De Laval user shall get the very best and the greatest possible service from his machine.

#### Supreme in Satisfaction

De Laval users are satisfied users, not only when the machine is new, but during the many years of its use.

#### Supreme in Sales

Because they are supreme in efficiency, construction, durability, improvements, service and satisfaction, more De Laval Cream Separators are sold every year than all other makes combined.

Get your De Laval now and let it begin saving cream for you right away. Remember that a De Laval may be bought for cash or on such liberal terms as to save its own cost. See the local De Laval agent, or if you don't know him, write to the nearest De Laval office as below.

**The De Laval Separator Co.**  
165 Broadway, New York  
29 E. Madison St., Chicago

**50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER**

cows 6 to 8 weeks' rest between lactation periods.

10. Join a dairy cattle breeders association. It will help you keep posted and in touch with the best and most modern ways of managing your dairy herd.



## CALKO DIP

(STANDARDIZED)

AN

### INSECTICIDE & DISINFECTANT FOR CATTLE SHEEP HOGS POULTRY

To be used for disinfecting barns, chicken coops, corrals, hog pens, out-houses and etc.

**One Gallon Calko Dip Makes**  
From 50 to 100 gallons disinfectant.  
45c qt.—75c half gal.—\$1 gal.  
Delivered

## Calko Hog Powders

IS A

### HOG CONDITIONER AND WORM EXPELLER

Don't feed Worms.  
Save your Hogs.

—25 lb. sack (delivered parcel post) \$2.00  
—50 lb. sack (delivered freight) \$3.50

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For 57 years this bank has been identified with the development of the inter-mountain region.

Progressive and steadily growing it offers you the benefit of its extensive facilities.

Resources over \$6,500,000. You can bank here by mail.

**Walker Brothers Bankers**  
SALT LAKE CITY





## HOG SPRING PASTURE.

The hog raising industry is growing rapidly in the State of Utah, hence the question of feed and pasture are becoming more important.

Pigs make greatest gains on pastures when fed a grain ration. Pasture cuts the feed cost in two. It alone isn't sufficient for most economic gains, and to obtain the best results grain is necessary. If spring pigs are kept on good pasture with a grain ration they make a rapid growth and are in good condition for the fall markets. Alfalfa, clover, bromus, or winter rye make the earliest spring pastures. If, however the farmer is short on pasture and wishes to get quick results oats fill the requirements best. Rape is not quite so early as oats but will furnish more feed, especially during the summer and fall. A mixture of three pecks of oats and five pounds of rape makes a satisfactory combination for early pasture. Peas and oats are also highly recommended for early pasture. In alternating this with alfalfa you get excellent results. Drill the oats in one way and then drill across the rows with the peas.

Many of the farmers of northern Utah have tried this combination and are enthusiastic over the results obtained. Peas also make a good fall pasture.

Turn in the pigs and let them hog it off when peas are matured.

## VACCINATE FOR BLACKLEG.

Dr. H. J. Frederick, head of the Veterinary Science Department of the Utah Agricultural College gives the following advice to stock raisers.

Blackleg is prevalent in nearly all parts of the state of Utah. This disease attacks only young thrifty cattle. In districts where blackleg has once existed and nothing is done to overcome the trouble, epidemics of the disease are common. The germ causing this disease will live in the ground for an indefinite period. All animals dying from this affection should be burned or buried deeply in the ground after having been thoroughly disinfected. They should never be permitted to lie on top of the ground where dogs and other animals may tear them to pieces and carry diseased portions over the country as this is a fruitful source for the spread of the disease.

Vaccination is the best insurance the stockmen can practice. All calves between the age of six months and two years should be vaccinated with blackleg vaccine. This vaccine is injected under the skin and renders the animal immune. Right now is the best time to vaccinate before the animals are turned out on the spring pastures and ranges.

## SLAUGHTER THE WEEDS NOW.

Weeds are most easily killed when they are just coming through the soil. Then a slight stirring of the soil kills them but if left till later they must be pulled, hoed, or plowed.

All beet, potato, corn, tomato, garden and summer fallow lands should be carefully harrowed, disked, or cultivated in some way within the next month depending on the condition of the soil. This will save an immense amount of labor later.

## RADISHES.

When radishes are pulled for use, if a seed is dropped into the soil which has been loosened by pulling the radishes from the ground, a constant supply can be kept on hand as long as you need them.

House cleaning time approaches. Why not take up that old carpet you hate so? If you can't afford a new rug try cutting the carpet smaller leaving a wood border all around the room or if you have a good floor cut the carpet into strips for small rugs and either paint or oil the floor. Get an oil mop made of string such as are sold for 75c to \$1.50, according to size and you will be surprised at the ease with which the room can be cleaned. The mop picks up all dust and lint and leaves a soft gloss on the floor and the small rugs can be taken out and easily shaken.

## NEVER DECEIVE AN ANIMAL

"You never can train a colt, a calf, or any animal, wild or tame, unless you gain its entire confidence and affection. To do this you must never deceive it, not even for fun, and always protect it and show that you love it.

"The way to a man's heart is through his stomach," and the road to the affection of an animal is by way of its taste.

"An apple, a bit of tender grass, or some tasty bit will soon make friends with it, and kind words and petting will make it a loving and obedient friend."—Farm and Fireside.

For Quick Work  
in Hay Time

Lifts Half a  
Ton Without  
Straining

WHAT'S ONE  
THIRD OF  
YOUR TIME IN  
THE HAY FIELD WORTH TO YOU?

Louden Hay Tools will save it. Will enable you to move bigger loads easier and faster than in any other way—avoid the danger of delay which often lets the rain catch your hay down, spoiling it for use or sale.

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Set the Louden Balance Grapple Fork across a load and it will take the entire width of an 8-foot rack at a single lift. Moves straw, alfalfa, or clover as clean as timothy—grips it tight; no scattering. Light, strong, perfectly balanced, never fails.

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is the sling you need for heavy work. Its factory test is 3,000 pounds. Will handle anything in the way of roughage without waste. Nothing to beat it as a time and labor saver.

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meets the needs of the hay grower for every kind of work. Has a guaranteed continuous working capacity of 1500 pounds. Louden Swivel Frame prevents rope troubles; roller-bearing rope wheels make it easy to operate. Can be used for either end or center drive.

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works with all the Louden hay tools. One man operates it from the load—takes the place of horse or team on the draft rope; saves you \$5 a day in hay harvest. Operates with steam, gasoline engine or electric motor.

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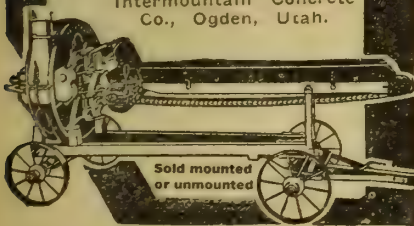
Be thinking now  
of next Silo filling

The farmer with a big, broad smile these days, is the one who was ready last fall to hustle his corn into the silo on a minute's notice, and wasn't worrying about getting it there, either, because he had a

BLIZZARD  
Ensilage Cutter

The Blizzard is the tried and true cutter for the farmer. Simple, easy to run, safe. Small engine runs it. Blz cutting capacity and unlimited elevating capacity. Self-feed table saves one man. Steady as a clock. Many in use after fourteen and fifteen years. Repair expense very small.

Come in—get a catalog and let's talk over the Blizzard  
Intermountain Concrete  
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Sold mounted  
or unmounted

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Any size roll developed  
10c.

Any size pack developed  
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Mention Utah Farmer when you write.

"Table Queen" Relieves  
Mother of Drudgery

A fresh loaf of Royal Table Queen Bread, from your grocer, any time you want it, gives mother more time for the pleasures of life. No more kneading of dough and standing over a hot fire while the bread bakes. A telephone call or a standing order at your grocers brings fresh

ROYAL  
TABLE QUEEN  
"The Perfect Bread"

to your home every day. This bread is filled with nutritious, palatable goodness. It is baked in a sanitary bakery, flooded with pure air and sunlight. It takes a blend of three to four highest grade flours to produce its exceptional flavor and health-giving properties. 5c and 10c loaves—wrapped or unwrapped.



Royal Baking Co., Salt Lake City, Utah





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#### OFFICES

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Lehi, Utah Kirkham Building.  
Our office at Salt Lake City, Utah,  
is at 417 McIntyre Building.



New York Office 5th Ave. Bldg.  
S. E. LEITH, Mgr.

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#### OFFICIAL ORGAN

Utah Horticultural Society, Utah State Dairymen's Association, Utah State Bee Keepers' Association, Bear River Valley Farmers' protective and Commercial Association, Agricultural College Extension Department and Utah State Fair Association, Utah-Idaho Millers' and Grain Dealers' Association, Utah Fruit Growers Association.

#### OUR GUARANTEE

We guarantee every subscriber against loss thru dishonesty or attempted swindle by any advertiser in this publication. We do not attempt, however, to adjust trifling differences between the subscribers and honest responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within thirty days from date of the transaction, and the subscriber must have mentioned Utah Farmer when writing the advertiser.

**Advertising Rates**—The advertising rates will be sent upon application.

A monthly pay check is a fine thing for any farmer. If you have some good dairy cows they will produce monthly returns.

Be kind to your animals, it is not only humane, but it is profitable. A dumb animal will soon repay any kindness.

The breeding season for poultry will soon be over, and then we should "Swat the Rooster." It does not pay to keep any males in the flock during the summer.

Riding plows and cultivators are sometimes called the lazy man's tools. Anything that makes a farmers work easier adds a little bit to his life, surely it is worth while.

Children, like all young things, whether it is colt, calf or lamb, love to play. They all seem to grow and develop better when they can have a certain amount of time for play.

Have you selected a good name for your farm? If so, erect an attractive sign near, or over the front gate, and you will be surprised at the added attention that will be given to your farm. Take a little time in selecting a proper name.

Now comes the suggestion of roofed roads—That people quit putting their money into roads and put it over them—that we roof instead of

pave. The question is what will a road of this kind cost, and what are its advantages?

Many people make the mistake of transplanting tender plants too early. This should not be done until permanent warm weather sets in. There is no advantage to be gained by setting out tender plants before the soil is thoroughly warmed up, and all danger of frosts have passed.

Now that you are working the horses more than usual see that the harness properly fits them. Don't let the horses get sore necks and shoulders. The work is hard enough on them at the best, so see that their harness properly fits them.

There are many reasons why you should have a vegetable garden. Unless the appetite has been very much prevented, people are anxious for fresh vegetables and fruit. These early vegetables and fruits contain the very things that satisfy the hunger and build up the system. If we were to pay a little more attention to our diet at this time of the year, we would prevent many a doctor bill. If you have not already planted a vegetable garden, it is not too late yet to do so.

#### DR. WIDTSOE'S WEEKLY MESSAGE.

For a matter of two or three weeks we will not be able to publish Dr. Widtsoe's Weekly Message, at the end of this time, however, they will appear again, and will continue regularly thereafter.

#### POLITICS ARE IN THE AIR

The farmers of this state should see to it, and select such men at the coming primaries and conventions who will look after their interests. We have no sympathy for the fellow who does all his kicking afterwards. It is very important that every citizen takes part in the local primaries, and helps to select people who will properly represent them.

#### BEAUTIFYING THE COUNTRY

We are more than pleased to see the interest that is being taken in many of the larger towns in the Clean-up movement, and we would like to see the country people as well take a greater interest in beautifying their homes. There should be a community effort to improve the country roads by planting trees, and the people living along these roads should paint their houses, barns and outbuildings. Often a bad impression is given of a locality because of the poor fences along our public highways. Special days should be set apart for cleaning up school grounds, church yards, and the country roads. This can be done if someone will take the initiative, and start the movement, emphasizing the importance of its being done.

#### ARE YOU MISSING SOMETHING

In conversation the other day with one of our County Agricultural men he reviewed to us what he had been doing for some of the farmers, and we were wondering if some of the farmers are not missing something. In a great number of counties we have these agricultural experts who are hired by the State and the County for one purpose only—to advance agricultural interests in the Counties where they work; besides these, we have the men from the State Agricultural College who are willing, and able, to help the farmers,

and it occurred to us, that if all of these men are willing and able to help the farmers, how many are taking advantage of it? Many farms are not bringing the best results. Why don't you call in one of these experts and get him to help you analyze why you do not get better returns? We are paying for their services, and if we don't ask them to help us, we are missing something.

#### WANT MORE AGRICULTURISTS.

If any young man thinks there are no chances for 'exper agriculturists listen to this. Five different states have sent to the Utah Agricultural College and want efficient men with technical and practical training and are willing to pay a good salary. From one to three thousands a year is being offered to start with.

Some times the boys from the farm choose to be other than "farmers." They want to be lawyers but from our information there are 10 "starving" at the lawyer job to one who is making a good living and lawyers are no different to many other professions. Only the other day a graduate of the Agricultural College was offered \$2,500 a year to teach school and he turned it down because he said he could make more on the farm and liked the work better.

From the present outlook there is a splendid chance for any young man who will prepare himself along agricultural lines.

This week we have three inquires for capable men who can manage a farm. Each inquiry is from a man who owns a large farm and want expert agricultrists to help them. One man says "I am willing to finance the right man."

For the young men who like farming who are willing to get in and work and study we believe there is a splendid future.

#### ADVERTISING—A MODERN WONDER

Advertising is looked upon from a much different point of view than it was a few years ago. Advertising is not only used for selling different manufacturers articles, but it is now being used socially, politically, and by large corporations as the best means of getting their case before the public.

A Southern City makes the claim that every disorderly resort in that city has been advertised out of existence by a public campaign planned and paid for by the churches. The great political parties and men seeking political offices, now use advertising as a means of attaining their desires. Large corporations involved in litigation, investigation, or strikes often use much space in placing their case before the public.

The Utah Farmer has established a careful censorship of all advertising. No objectionable or questionable advertising is accepted. The result of this policy has been demonstrated, and the better advertisers are supporting the Utah Farmer in its campaign for truthful advertising.

We want our readers' support, because, after all, they are the ones to decide the question. We want you to patronize the advertisers who support the Utah Farmer. Don't be afraid to let them know that you have been influenced to buy this or that, because it was advertised in the Utah Farmer, in so doing you are more than helping the Utah Farmer, you are helping the great cause of truthful advertising. We hope that you will feel perfectly free to patronize anyone who advertises with us.



# REASONABLE RETURNS FROM WALNUTS

(Continued from page 3)

is safe to say, however, that we produced on the average, nearly 50 per cent of the walnuts consumed in the United States.

C. No. 3. "The importation of nuts from Europe annually amounts to \$20,000,000. Why not raise them here even if the English walnut groves of Europe are not all destroyed during this war?" (Inasmuch as the discussion as a whole concerns walnuts, it is taken for granted that this claim of \$20,000,000 importation of nuts, means English walnuts.)

A. No. 3. According to the 1913 Yearbook, the importation of English walnuts during the eleven years 1903-1913 inclusive, practically amounted to 27,397,000 pounds per year. If valued at 12 cents per pound, which is rather higher than the average wholesale price received by California growers during this period, the valuation would be \$3,287, 640. This falls considerably short of \$20,000,000 worth of nuts as quoted.

C. No. 4. "The Pomeroy has proven hardy in Canada as well as from Maine to California, Utah to Florida, and will flourish in any soil suitable for other fruit trees."

A. No. 4. The Pomeroy walnut has proven hardy in Utah and although it has been under observation only about four years, it is probably safe to plant it anywhere the peach is grown, so far as climatic conditions are concerned. However, the walnut is not as well adapted to gravel soils as the peach, as implied above. A deep silty loam well supplied with humus is to be preferred for walnuts.

C. No. 5. (a) "The Pomeroy nuts are thin shelled and fall from the outside shuck in October. (b) The meat is very sweet and plump and will not turn rancid in hot weather."

A. No. 5 (a) The nuts shuck out much the same as any other walnut (b) The quality is only medium, much like the seedlings of California. The claim that the kernel will not turn rancid in hot weather seems remarkable. The several best quality varieties, such as the Franquette will turn rancid if not stored in a cool place.

C. No. 6. "During 36 years' experience with English walnuts we have never had to spray our trees."

A. No. 6. As a rule English walnuts are not sprayed for any insect or fungus difficulty.

C. No. 7. "English walnut trees should be replanted while very small, as they will often double in size the year the tap-root reaches the subsoil moisture."

A. No. 7. Most California nut growers prefer a medium to large tree rather than a very small one. Trees from 8 to 10 feet and of an inch and one-quarter to one and one-half in diameter are usually preferred by the most experienced planters.

C. No. 8. It is further stated by some nurserymen that walnut wood is more valuable than mahogany.

A. No. 8. The assertion that walnut wood is more valuable, for cabinet making, etc., than mahogany seems almost incredible. Thousands of feet of walnut wood are cut annually in California in removing old groves, and this wood is sold as cord wood. The writer's attention has never been called to any other use of this wood than for fuel purposes.

It is amusing to read, from time to

time, the expected walnut yields figured by some enthusiast who has based his calculations on the production of a certain door-yard tree multiplied by most any given number per acre. This is a harmless pastime if such little examples were to be read only by persons familiar with commercial walnut growing or those not likely to invest in it.

On the other hand, if beginners in this industry base their expectations on any such theorizing, disappointment is likely to await them. In a recent article is a well known nut journal, the writer asks the reader to "figure for himself, 250 pounds per tree at 15 cents per pound and 27 trees to the acre, at 40 feet apart," etc.

The 250 pounds per tree is thought by the writer of the above quotation to be the average production of a small number of solitary trees. Thus far the little example in plain arithmetic sounds reasonable, though above the average. The 15 cents per pound, however, is far more than commercial nut growers have averaged for their entire crops for the past five or ten years. This is merely mentioned in passing, however.

The real place where pencil and paper results will differ from actual realization is in figuring an average of 250 pounds per tree with the trees crowded to the rate of 27 trees per acre, (40 ft. x 40 ft.).

It is a matter of common observation that the walnut tree will not thrive when crowded in grove form as well as many other fruit trees. On almost every hand one finds the border trees of a mature grove more productive than center trees. California groves on good walnut soils are in many cases too crowded with three planted 50 ft. x 50 ft. (17 trees per acre). Some of the older growers feel that 60 ft. x 60 ft. is close enough for mature walnut trees, (12 per acre). Again, the average production of the bearing walnut groves in California is less than 1000 pounds per acre, (although there are numerous door-yard trees with ample room for development, which are producing 250 pounds or more). A grove which produces 1500 pounds per acre is better than the average, and one which will average to annually produce 2000 pounds per acre is very rare; an occasional production of 3000 pounds is sometimes heard of, but such cases are "hard to find."

This discussion may enlighten anyone who starts to figure for himself the little example which read 250 pounds per x 27 trees per acre, equals 7750 pounds per acre (not to speak of the 15 cents per pound).

Of course the newer walnut regions may far excel the California groves in production and for the sake of owners it is hoped they will. On the other hand, if prospective walnut planters in the newer sections merely anticipate such yields as have been realized in one of the largest and most successful tried sections of the world, possibly there will be less disappointment in store when the pencil and paper gives way to walnut sacks.

Walnut growing is a very stable, conservative branch of the fruit industry, but the trees have not literally "rained" gold dollars except in theory.

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A farm of 50 acres, located in a very fertile section, that can be purchased for less than \$4000.00—cash or will accept reasonable terms.

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Good market nearby for farm products and is located on Railroad giving excellent shipping facilities.

**PRIOR WATER RIGHT AT \$1.00 PER ACRE IF USED.**

**WRITE TODAY** for information or see us before it is too late—This is your opportunity.

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604 Dooly Building

Salt Lake City, Utah



## Lest We Forget

Jos. W. Fox.

The following scrambled miscellaneous, ideas of orchard practice may seem a useless reiteration of obvious facts to the rustling, up-to-the-minute, fruit grower; but to such they are not directed. The whole need not the physician.

Who gets the tongue lashing of the preacher? Not the man of worldly mind who does not attend church. No the vials of the preachers wraths are emptied on the heads of the godly and pious who are regular in their church attendance.

Thus it is with farm papers. In general the man who should read them; the man who is slack in his farm operations and careless of his orchard; the man to whom they would be of great value is indifferent and seldom reads them, unless under the spell of the spring fever.

Upon inquiring of a certain fruit grower the reason for his trees having eight and ten inch stubs of limbs sticking out from all directions of the trunk, the writer was informed that they had been left especially with a view to facilitate climbing the trees during fruit harvesting, and further that they were useful to hang a bucket on while fruit was being picked from the nearby branches.

If there is an unpardonable sin in pruning, it is that of leaving a stub. Cut back to the trunk or main limb, or in heading back, cut to a branch, always making the cut sloping so that water will not stand on it.

Cheap shears are dear at any price. Buy those of reliable make with heavy blade and bar, that will not sprain and are a pleasure to work with. Good work with sprained shears is impossible.

A thin bladed, back cutting saw, costing about a half dollar, is the proper thing for pruning. In sharpening, keep a wide set, and file a great deal of rake to the teeth. It will cut with surprising rapidity and ease.

A curved pruning saw is also a fine thing to scrape off the rough bark on the trunk.

Gather up all the bands of last year still on the trees and burn them. Don't put it off.

A man who owned a large orchard, had a number of Wolf River trees, that were very shy bearers, so every winter he decided to summer prune them, but always neglected to do so, either because of the press of work, or that he had not the heart to sacrifice the small amount of fruit growing at the time. The trees with out pruning grew very rank and ragged, so that in the month of July, the largest one, split into three sections all of which lay on the ground. To save the tree it was necessary to prune very severely, and with wire and eyebolts, draw the limbs back into place. The ten boxes of fine fruit that this tree bore the following season was an object lesson in the summer pruning of shy bearers.

Most owners of useless, old neglected fruit trees will cut them out if their attention is called to the fact that they are breeding pests for the orchardist to fight.

Persons desirous of planting a few trees for shade, should be encouraged to plant shade trees instead of fruit trees as is so often the case. In



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They Grow Harder and Stronger With Age. All Other Pipes Decline.

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Highest Class Royalty Plays  
NEW BILL EVERY SUNDAY  
Matinees Thursday and Saturday  
Evenings 15-25-35-50c  
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this respect the English Walnut is  
to be highly recommended.

Why not look over the varieties of  
trees recommended by the shippers  
before sending in the order?

Nearly all orchards have an off  
year, or a year of light crop. The  
year of the heavy crop should be the  
year of the heavy pruning, and vice  
versa.

**BUYING TOMATO PLANTS.**

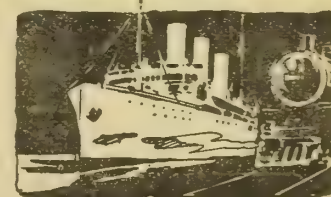
Much care should be taken in the  
choice of tomato plants for setting  
out into the field. The small gardener  
who depends on plants raised by the  
more extensive grower must demand  
the best plants from the standpoint  
of variety, health and vigor of the  
plants.

In determining the varieties to be  
planted the gardener must aim at a  
succession which will supply tomatoes  
throughout the season. A combina-  
tion of varieties that can be highly  
recommended is, Earline for real  
early (preferably Langden's) Chalks  
Early Jewel, for mid season, and  
Stone or Redrock for the late tomato.

If tomato plants have been given  
plenty of space in the hot bed and  
good care from the start they will  
have a good stalky growth. Spindly  
plants should be avoided. The ideal  
plant will be from eight to twelve  
inches in height and have a stem  
measuring at least three-eighths of an  
inch in diameter.

**TWO CROPS OF CABBAGE.**

Early cabbage can be made to pro-  
duce two heads. When cutting the  
early head cut it with as few large  
leaves as possible. Small heads will  
start in the axils of the leaves and  
one should be selected and the others  
removed. Fertilize, cultivate, mulch  
heavily and water well and no further  
care will be needed. The second head  
may not be as large as the first but it  
is solid and tender and ready to use  
before cold winter.



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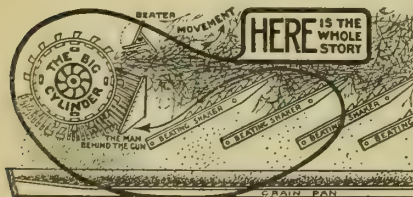
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The Nichols & Shepard Company issue every year a mighty interesting little paper that many of your own neighbors write for. It is the Home Edition of the Red River Special covering your region. Send for a copy and put in a request for the Big Catalog at the same time. Both are free.

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Mention Utah Farmer when you write.

## HOME

### THE NOON MEAL AT HOME WITH SPECIAL REFERENCE TO THE CHILDREN.

There is no reason why the ordinary family dinner should not be suitable for school children or served in a way that adapts it to their needs, according to the U. S. Department of Agriculture. The usual first course of meat and vegetables contains nothing, except the meat, which can not be given even to the youngest children. The vegetables, providing they are carefully prepared by simple methods, are specially needed and can often be made attractive to children by being served with a little meat gravy. As a substitute for the meat itself, milk can be provided in the case of the younger children. These articles, with the bread and butter, provide most of the food needed.

The dessert course is suitable for children as well as for grown people unless it consists of rich pastries or puddings. The latter are not considered wholesome for children, if for no other reason than that they are likely to lead to overeating. Such desserts as fruit, fresh or cooked, with cake; cereals with milk or cream, and sugar; custards and custard puddings; gelatin dishes; simple ice cream; water ices; and other simple desserts may be given.

Whether or not the family meal is healthful for children depends not only on the food materials selected, but also on the way in which they are cooked. Simple methods are to be preferred from the standpoint of health as well as from that of the housekeeper's time. All dishes that are likely to contain overheated and scorched fats, such as foods carelessly fried in a pan in a small amount of fat, should be avoided. Deep-fat frying is open to fewer objections, since, if properly done, foods will absorb little fat and the fat will not scorch. Vegetables cooked in water or in their own juices and seasoned with salt and a little butter or cream, are easier to prepare than those that are served with white sauce, scalloped, or cooked in other elaborate ways.

What is said above applies equally to all meals. There is, however, one special precaution that applies to the noon meal when it is hurried. This refers to tough, hard foods that are likely to escape proper mastication. It is a mistake to think that the foods given to children must always be soft or finely divided, for children's teeth need exercise quite as much as their muscles do. When time for eating is limited, however, it is well to omit foods that are difficult to chew, and in extreme cases it may be necessary to serve only soft or finely divided foods—sandwiches made from crustless bread with finely chopped fillings for example. Before resorting to this, however, it is well to make sure that the time for eating and for insistence on good table manners is not unnecessarily cut short. The advantage of putting the meal on the table promptly and of having foods served in individual portions, or at least ready to eat when they are brought to the table, should be kept in mind. To have the meat already sliced and the dessert in cups instead of in one large dish from which individual

portions must be served, and to follow the same general plan with other foods, may change a hurried meal into one at which there is plenty of time for attention to details essential to health and good manners.

If special lunches, different from those prepared for the family in general, are to be given to school children, the following are suggested as bills of fare. They are only typical and many others might be given which would be just as good.

### Suggested Bills of Fare for the Home Lunch.

1. Eggs, boiled, coddled, poached, or scrambled; bread and butter; spinach or other greens; cake.
2. Beef stew with vegetables; milk; crisp, thin tea biscuits; honey.
3. Dried bean or pea puree; toast; baked apple; cookies.
4. Vegetable-milk soup; zwieback; rice with maple sugar and butter or with milk or cream.
5. Potato chowder; crackers; jelly sandwiches.
6. Cold meat; creamed potatoes; peas; bread and butter; frozen custard or plain ice cream and plain cake.
7. Lamb chop; baked potatoes; bread and butter; sliced mixed fruits; cookies.
8. Baked omelet with spinach, kale or other greens; bread and butter; apple sauce; cake.
9. Milk toast; string beans; stewed fruit; cake.
10. Boiled potatoes; codfish gravy; bread and butter; lettuce; custard.

### FRESH AIR FOR CHILDREN.

It is not always by the actual earning of money that one may help out the family exchequer. Laboring to prevent unnecessary expenses is quite as effective in increasing a bank account. As the mother of children I decided right in the beginning to avoid doctor bills. These I know to be no inconsiderable sum in a great many families where there are a number of children.

One of the vivid recollections of my own childhood is the days and nights of suffering caused by coughs, colds, sore throats, and ear-aches. How well I remember whenever diphtheria or tonsillitis became prevalent in our neighborhood, how we children would be taken at night into a tightly-closed room and have our throats swabbed with tar or dusted with powdered sulphur and then be put to bed choking from the fumes of burning sulphur. As I grew older, our family became fresh air converts, and having seen what it would do in my own case, I determined that my children should have every benefit possible to be derived from pure fresh air. While tents and sleeping porches are convenient for this purpose, they are an extra expense, and not a necessity. Fresh air may be had for the asking. Just open the window and let it in.

My oldest boy was born in April and I soon began putting him out of doors in his cart. It being summertime, this excited no comments, but when winter came and I still continued to put him out from 3 to 4 hours every day, aunts, grandmothers, and neighbor women began to prophesy an untimely end. One must be warm and comfortable or the results are not satisfactory. I always chose a corner where the wind did not strike directly and a time of the day when the sun shone warmest. As our veranda is on the southwest



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32x3 1/2 in. 12.75 8.50 36x4 3/4 in. 22.50 5.75  
33x4 in. 15.75 4.20 37x4 1/2 in. 23.60 6.20  
34x4 in. 16.70 4.35 37x5 in. 25.30 6.50

All other sizes not included in above list also furnished. Non-skids at 10% additional. Terms: Payment with order for above special prices, a 10% discount allowed on orders for two or more tires. All personal checks must be certified.

Try these tires now and be convinced of their very high qualities. Sold direct to the consumer only.

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Strongest, Most Durable, Most Economical and Simplest Balers Made—best work—capacity 10 perfect bales in 5 minutes—exclusive features. Fully guaranteed 50 styles. Hand Horse, Belt and Engine Power. Write for free catalog. Whitman Agricultural Co., 6948 S. Broadway, St. Louis, Mo.

**RAT CURE**  
TABLETS  
ONLY RATS WILL EAT  
TRY BEFORE YOU PAY  
KILLS 4 RATS FOR 1 CENT  
MOPISRITE PFG. CO., Dept. F BLOOMFIELD, N.J., U.S.A.



## RELIABLE FARM BARGAINS

80 acres in the Bear River Valley, first class water right all under high state of cultivation. Good improvements. \$130.00 per acre, on time.

40 acres all in alfalfa. First class water right. Will take \$300.00 down and ten years to pay with 6 per cent interest.

95 acres near a good town. All modern conveniences near by. Will exchange for a home in Salt Lake City.

One acre, 16th South and 9th East. \$500. Very easy terms.

80 acres in Cache valley, with 8-room brick house; good outbuildings and orchard; spring water piped to the house. Under irrigation. Will sell for \$62.50 per acre or exchange for Salt Lake City property.

2½ acres on 15th South and 3rd East. \$1275. Very easy terms.

Phone—Wasatch 963.

KIMBALL and RICHARDS  
"Land Merchants"

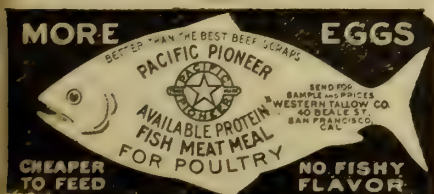
56-58 Main St.,  
Salt Lake City, Utah.

## Tests Prove This Sugar Perfect

Those who have put Utah-Idaho Sugar to rigid tests, find it to be perfect. No one has yet been able to find a fault or pick a flaw in this pure, crystal-white sugar. Of course, it is no more than natural that sugar made with efficient, scientific methods should be perfect. The best sugar beets that money can buy are used; the most skillful help is employed; the factories are models of sanitation.

A sack of this splendid sugar awaits you at your grocer's. Buy it today. Be sure you ask for—

UTAH-IDAHO SUGAR  
ABSOLUTELY PURE



side of the house, I often had to contrive a wind-break when the wind blew from the west. On very stormy days I kept him in the house. At night he slept in a room with the windows open, and four winters with never an attack of croup, cough, sore-throat, ear-ache or any of the maladies so common in winter, that are caused chiefly from improper ventilation, have convinced me that my method is a success. I am sure any one who might happen to see him these cold winter days, trotting about after his father as he cares for the stock, wading through the snow, and coming in, his cheeks rosy with health, would quite agree with me. With my two-year-old boy I proceeded in the same manner with the same results.

My little girl, 3 months old, did not have the advantage of summer weather that her brothers had to make her start in life. She is, as yet, too young and tender to stand extreme cold for any length of time, but she has a little nap out doors every sun-shiny day and at night not only does she have a bed to herself, but a big room too, that is filled with fresh air before she is put to bed and then slightly warmed, and her nights of unbroken slumber prove this plan a success too.

Our editor requires facts-and-figures. The facts I have related, the figures are few. In truth there is but one; just a great big cipher, the sum of the long list of doctor bills we have not had to pay.

Of course, fresh air is not all-sufficient. Proper diet is quite as important, but that is too broad a subject to be even touched upon in so short an article.

### IN YOUR OWN BACK YARD

"Fresh carrots in your own back yard May fill your table needs, And please the eye all summer, too, Where erstwhile nourished weeds.

"Close to your house, spade up and rake  
A twelve-inch strip of ground;  
Three inches back from either edge,  
Plant carrot seeds around.

"The feathery leaves resemble ferns.  
To make the spot more bright,  
Add poppy or nasturtium seeds.  
"Twill bring sustained delight!"

—Woman's Home Companion.

Tommy was writing a long letter to his father at the front when a visitor was brought into the room by his aunt.

In his haste to clear the table, Tommy upset the ink all over the brand-new plush tablecloth. Immediately he began to sob.

"Cheer up!" said the visitor kindly "Remember, it's no use crying over spilt milk."

But Tommy replied amid his sobs: "Course it ain't. But when you spill milk you've just got to call the cat, and she'll lick it up for you. But this ain't milk, and mother will do the licking."—Exchange.

### FOR THE MAN WHO SNORES.

Mrs. Brown (shaking her husband who snores with his mouth open): "William! William! You're snoring simply awful! You would make less noise if you'd keep your mouth shut!" William (only half awake): "So would you, Maria."

## BIG INCOMES FOR WELL DRILLERS

### \$2500.00 to \$10,000.00 Per Year Clear

If you want to get into a big paying business of your own and be your own boss, investigate the exceptional opportunity now offered in the Well Drilling Business. Ten times more work to be done than drillers to do it! \$50.00 a day clear profit is what many men are doing with

I clear \$50.00 a day above expenses right along. Thos. Kelly



## Armstrong Well Drilling Machinery

We've been building high-grade drilling machinery for nearly half a century. We've learned how to combine simplicity and durability. And we offer equipment that will drill faster and at a lower cost per foot than any other machinery in existence—machinery that is easiest to operate—that runs quietly—eliminates repair bills—that is always on the job. Our patented Internal Compensating Band Wheel Clutch—a feature that saves all lost motion—is one of the greatest improvements ever found on a drilling machine. Besides saving energy and power, it gives absolute control

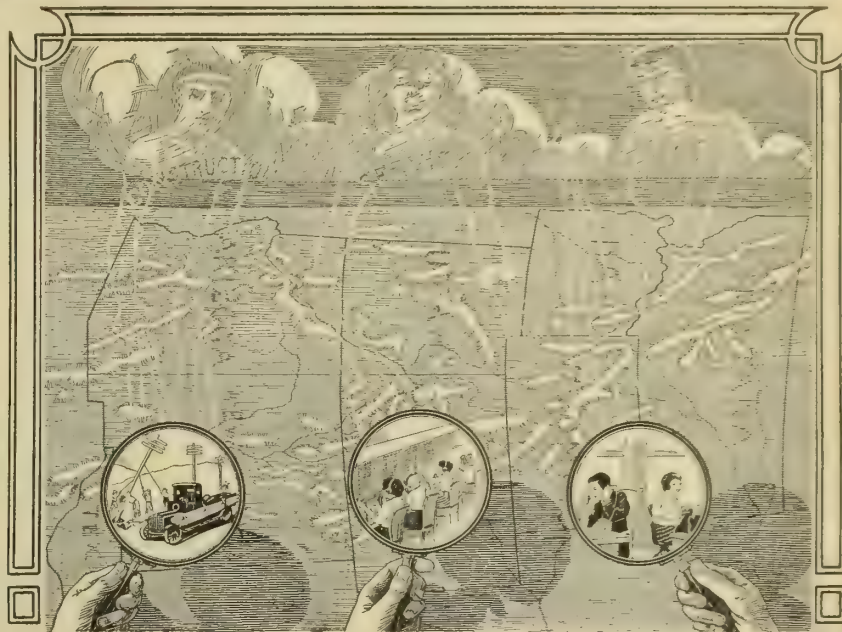
over drilling motion. This and our Friction Moist, another great trouble and work saver, give operator an easy right-hand control of entire machine, including raising and lowering the derrick by power. Many other equally striking advantages.

Pay for an Armstrong Drill as it pays for itself on our part cash and time payment plan.

Write Today for our big free catalog. Tells all about Armstrong Drilling Machinery and the Well Drilling Business.

ARMSTRONG MFG. CO.

508 Chestnut Street, Waterloo, Iowa



## Ideals and Enterprise

Ambition is never satisfied with existing conditions; it continually strives for the ideal.

Enterprise cannot be content with the accomplishments of today; it must needs accomplish bigger things on the morrow.

Enterprise is ambition in action. It is the force that carries the ambitious toward the goal of their ideals.

Our Company is a company of ideals.

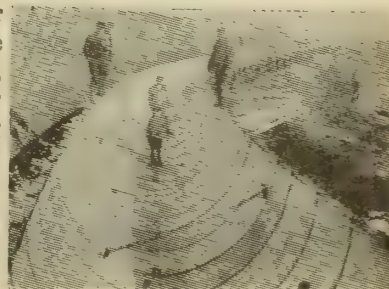
We have ideals of construction standards ideals of service efficiency and ideals of our duty to the public.

To the enterprise of our army of five thousand ambitious men and women, with the ideals of their Company ever before them, is due the credit of building, maintaining and operating the comprehensive telephone system which serves the people of the Mountain States.

It is this enterprise that has connected 260,000 telephones together, from which originate over a million exchange messages every day, and more than six and a half million long distance messages every year.

THE MOUNTAIN STATES TELEPHONE AND TELEGRAPH CO.

If you are losing 60% of your water through SEEPAGE, which is the average loss in irrigation ditches, use our LENNON Smooth Flume for Ditch Lining. Instead of building dikes to carry water across your low places, use Flume. It will not leak and will pay for itself the first year, by the water it will save you. Made in all sizes. We sell everything for irrigation.



UTAH CORRUGATED CULVERT & FLUME CO.  
Woods Cross, Utah.



# RESULTS OF TWO ANNUAL ROUND-UPS AT GRANITE HIGH SCHOOL (Continued from page 3)

meetings were filled up with practical farm subjects, as crops, and stock and farm management. The ladies' meetings concerned themselves with talks and demonstrations on practical topics of cooking, sewing and household management. At the conjoint meetings which were held daily at 1:00 p. m. well known speakers addressed the men and women on large subjects of community welfare. At one of these conjoint meetings Dr. E. G. Gowans spoke on "Recent Tendencies in Education." Ed P. Kimball inspired his audience on the subject of "Music in the Home," Lon J. Haddock delivered an address on "Proper Training for the World's Work." Prof. C. D. Steiner of the U. of U. gave an illustrated lecture on "The Fly," W. S. Hansen spoke on "The Model Home," and Dr. Elmer I. Goshen delivered an oration on "Abraham Lincoln."

Evening meetings were held three evenings, and a basket ball game one other evening. At one of these sessions the affiliated Commercial Clubs of the County held their annual meeting and elected new officers for the year. On another evening the amusement leaders of the community gathered to discuss how to conduct the modern dance. The boy Scouts also met one evening. The High School Parent-Teachers Association met one afternoon.

The program for Wednesday February 9th will serve to show the sort of work covered each day:

Wednesday February 9th, 1916.

10:00 A. M. Department Meetings:  
Ladies

"The School girls dress" Mrs. Rachel Grant Taylor Matron of the L. D. S. High School.

Men's  
"Records in Dairying" by J. E. Dorman, chief of western office Dairy Division, U. S. Department of Agriculture.

"Hog Breeding and Improvement" by Jesse Richards of the Richards Livestock Co. Virginia, Idaho.  
12:00 Noon:

Basket lunch—Gymnasium.

1:00 P. M. General Session:

Music High School Orchestra (2 selections).

Violin Solo, Wilford Stay: Vocal Solo, Morris Knott.

Address "Proper Training for the World's Work" Lon J. Haddock.

2:15 P. M.—4:00 P. M.

Dancing for young people. Students will be instructed in the new dances.

2:15 P. M. Department Meetings:

Ladies "Womens Work in the Home" Miss Lucy Van Cott, U. of U.

Mens "Animal Feeding" Dr. W. E. Carroll, U. A. C.

Inspection of Dairy Show, director Shirl Winder, Granger.

Judging dairy cows and bulls, Dr. W. E. Carroll U. A. C.

Inspection of Dairy Show, director Manassah Smith, Granger.

Judging hogs, Jesse Richards, Virginia, Idaho.

4:00 P. M.

Basket Ball Game—Granite High School vs. L. D. S. High School.

8:00 P. M.

Boys Scouts special Rally. Story telling, games, exhibits, songs and yells. Rousing address.

Wireless Demonstration, Granite

High School Wireless Club, under direction S. H. Besley, Instructor.

10:15 A. M. Special Meeting for Students. Gymnasium.

Lecture—"Business Salesmanship" John D. Spencer, Salt Lake City.

Music—Granite Male Quartette.

Besides the meetings, demonstrations and exhibits were held daily. The exhibits of grain and fruit were as good as seen at the state fair. The dairy, hog and horse shows were representative of the breeds. Each of these exhibits and shows was under assigned direction of a well known farmer. He did all the work of stirring up interest and seeing to the gathering and setting up of his exhibit or show. This plan of directorship was eminently successful, and was one means of favorable advertisement.

Demonstrations were carried on daily by the boys in the agricultural rooms. They were much commended. Among the things demonstrated were: drying and testing seed corn; selecting and treating seed potatoes; candling eggs and preserving eggs in water glass; washing and oiling the harness; testing milk for butter fat; showing difference in pull on good and bad roads, etc.

Models of farm equipment had been made by students and were on exhibition. Some of these were: poultry colony houses; hog cots; trap nests; road drag; alfalfa weevil dray; hog feeding door and feeding hoppers.

Besides these exhibits the shop exhibited parlor and dining room furniture; the art department printed and painted our advertisement posters and the sewing department exhibited samples of work done in classes.

Regular school work was practically suspended during the entire week. But it undoubtedly was a week of big educational advantage to the boys and girls. The first two classes were held daily each morning. Then at 10:15 the students met in the gymnasium (our auditorium is just being built). There they were given special programs adapted to young peoples interests. The students met again in the general session at 1:00 P. M. after which they attended the dancing matinees held daily, or department meetings.

Friday was grade school afternoon. It drew the largest crowd of the convention. Supt. C. H. Skidmore was in charge. The seventh and eighth grade students all came with teachers and principals. At this time the winners of prizes in the boys and girls clubs were awarded district and state ribbons and medals by J. C. Hogenson, State Boy's Club Leader. About 1000 attended this meeting.

Following this program the Parent-Teachers Association of Granite High School held their regular quarterly meeting. It was very largely attended.

How the Work was Organized.

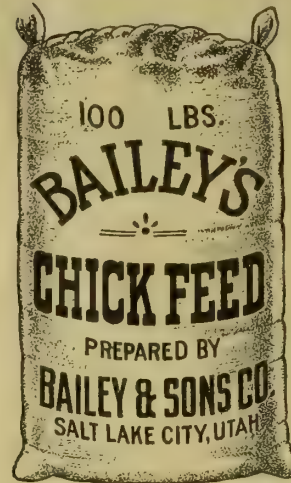
The total financial outlay by the school will not exceed fifty dollars. Most of this was for the bunting and sign painters linen and for lunches served the guests daily.

The arrangement and management of the entire convention is in the hands of a standing committee call The Publicity Committee. This is convenient and is similar to the arrangement at the A. C. where Round-ups are under a department of the Extension Division. The membership of this committee includes the instructors in shop, in agricul-

YOUR CHICKS NEED

# Bailey's Chick Feed

Look for this Bag



Recognized by successful poultrymen as the most satisfactory Dry Food of Baby Chicks.

Send Today for our latest illustrated complete poultry Supply Catalogue.

**BAILEY & SONS CO.**  
EVERYTHING IN POULTRY SUPPLIES  
**SALT LAKE CITY, UTAH**

VOGELER'S SPECIAL  
**Hog Pasture Mixture**

**Raising Hogs for Profit**



By feeding them on grain and keeping them in small inclosures has proven to be unprofitable, but by providing them with our clover pasture mixture they can be produced very cheaply and at a good profit to the grower. The different varieties of

clover that Vogeler's special hog pasture mixture contains gives them a healthy appetite, this combined with a light grain ration, will mature your hogs quickly, and money making proposition. Sow a few acres now, it will prove a winner. 15 pounds per acre is sufficient, only 20 cents per pound. Order now and make money out of your hogs.

**VOGELER SEED CO.**

SALT LAKE CITY, UTAH.



ture, in domestic art and in domestic science, and the instructor in economics.

The program was cast last December 2 months ahead and requests for speakers sent to the A. C. before the holidays. Invitations to special talkers were sent out early in January. We found that excellent speakers were available from practical walks of life in various parts of the state, and, without a single exception, those whom we invited came freely, even paying their own transportation and all other expenses. They included breeders of livestock from Idaho and northern Utah. Their contributions were most valuable. Also the corporations were liberal. The Utah-Idaho sugar company sent one expert and would have sent more if our mail had not miscarried in one instance. The local smelter officials loaned splendid exhibits and sent able experts. The U. S. Department of Agriculture officials located in the Federal Building in Salt Lake City were willing to join us, as was the state Road Commission. The County Commissioners came in a body and delivered key note addresses at the opening session. The U. of U. responded to every call and the U. A. C. were behind our work from the very beginning and sent us liberally of their staff.

Sub-committees were appointed to care for the many details. These committees were very active. They took care of decorations, seating ushers, meeting guests at cars, entertainment, policing, signs, advertising, etc.

**What our Experience Has Taught Us.**

1—That the Community Convention plan has a place in high school programs. We agree with Eggleston that "it is only tradition that excludes the adult from school problems."

Our high schools are the "peoples colleges," and this does not mean merely "young people," but all the people. It is the particular business of the school to foster and stimulate every form of community welfare, in the school plant, on the farms and shops, and offices and in the home. To say that this sort of work is already being done by the traditional school as far as lies in the sphere of schools is simply to sit down with folded arms in the midst of fields "white already to harvest," and to shut ones eyes to countless beckoning hands weary with drudgery and calling for help. Our schools will not do either of these unthinkable things. Neither will our schools falter because of early apathy on the part of many or partial failure at the start.

2—That the programs must be fundamentally of a practical interest suited to the locality. Other interests can be appealed to for variety and breadth, but cannot supplant the first matters.

3—Demonstrations, exhibits and shows draw better than lectures alone. They can be made the drawing cards and the lectures can then follow or accompany.

4—The A. M. meetings are not so well attended as those in the afternoons. We aim to put a strong drawing show or demonstration on every morning session next year. Say, the dairy judging or horse pulling contest, or plowing contest, or tractor demonstration, or riding contest, or horse harnessing contest, etc., etc. The afternoon attendance will then take care of itself. The A. M. sessions of Logan Round-Up this year were fine successes because of the morning demonstrations.

5—Steriopticon lectures are more educational than ninety per cent of the best lectures without slides.

6—We aim to give our students more time to demonstrate along useful lines at the morning sessions next year. It is educational and it is strong in drawing interest.

7—The feature of having many local organizations hold their annual meetings evenings during this week helps to make the meetings better attended but also helps to focus much local interest in the one big idea—the convention as a whole.

8—The advertising should commence at least one month ahead. Two months is better. Begin to announce in the papers little items thus early, as when some good speaker sends word he can come, or when some special feature is planned, etc. The grade schools are a good medium for passing out advertisement doggers into the homes of the people. Button-hole tags sent out to the grade school to be worn home are good. Posters made at school can be placed in store windows and on poles at cross roads and about churches and schools. Large banners painted at school on canvas can be hung across main highways. Pupils appointed to give out announcements in all ward meetings for the two Sundays preceding the convention are better than to rely on the ward authorities. We believe the faculty might well go out one to each ward to make the announcement the Sunday preceding the convention. Printed matter for advertisement should carry ads to cover cost.

9—Some high schools have had their own teachers in Home Economics and in Agriculture placed

## Proper Feeding War Started by Women

NEW YORK, February 27.—Prominent women representing all parts of the country have been appointed members of a special committee to organize the campaign undertaken by the National Housewives' League to build up the health of the nation through proper feeding as its contribution to the preparedness movement, it was announced here tonight. Every woman's organization in the country will be urged to take up the propaganda.

**Nutrition Experts  
recommend chocolate as  
one of the most nutritious  
and delicious of foods.  
Health—and economy—  
follow the daily breakfast  
cup of strength-supplying**

# GHIRARDELLI'S GROUND CHOCOLATE

In ½-lb., 1-lb. and 3-lb. hermetically sealed cans. There's a double economy in buying the 3-lb. cans.

**D. GHIRARDELLI CO.**

Since 1852

San Francisco

on the Round-up and Convention programs to form the major part thereof. This seems most commendable for a number of reasons. But it has not worked out just right. People have to have a allurement of a well known name and fame in order to be drawn from the old ruts. Until convention attendance has become a habit the strange face and much advertised name are necessary in drawing a good attendance, even though the work given may not be so much better than the "home talent" can give.

10—"A grade school" always draws the largest adult crowd also. When "our" boys or girls are going to be "on the program," although only in the chorus, we always find time to show up at the meeting.

11—It is a splendid time to put on the school play.

12—A special issue of the school

paper may come out the week preceding the Convention, containing winning papers on the work to be done at the convention.

W. E. Goodspeed of the Utah Agricultural College has had experience in the raising of many varieties of corn for table use and recommends the Cory, the early Crosby, the Golden Bantam, and Country Gentleman as an excellent combination for furnishing the gardener with early, medium and late corn.

The Cory matures early and provides an excellent corn up until the mid-season when the early Crosby furnishes a new supply. The Golden Bantam and Country Gentleman come on about the close of the season after the Early Crosby is no longer marketable. With these four varieties in your garden the seasons supply of table corn is assured.

## VICO

Automobile  
OIL



OIL is looked upon by some inexperienced motorists as a detail of small importance. Sooner or later, however, when their attention is directed to the rapid deterioration of their cars, they realize that the life of any motor depends on correct lubrication. A thoughtful selection of a perfect oil for this climate will naturally lead you to VICO AUTOMOBILE OIL. Three consistencies — light medium and heavy—make good at all temperatures.

**Utah Oil Refining Co.**  
Refiners  
Salt Lake



**"EVERY  
DROP  
COUNTS"**



## POULTRY

### BEST TIME TO HATCH.

The best time to do anything from which we hope to make money is when we can get results with least labor and loss. Now if we hatch at some seasons of the year, the mortality is greater than at others; if we hatch at other times the care and labor is greater and the feed bills higher. If we hatch during December, January and February the care of the chickens is a little heavier, but green feed is more abundant and we get more for the broilers. These things look tempting, but to offset them the pullets will go into a molt just when eggs are worth something. This is the great drawback of winter and early hatched pullets. A great many people do not know this, others think that by careful handling and feeding they can beat the game, but it can't be done in this climate. It seems to be a real fact that we can't get away with by any kind of managing. And when several hundred pullets go into a midwinter molt it is a serious loss.

**Feed for Good Frame.**—Now this loss can be avoided by hatching later and feeding pullets so that they do not mature too suddenly. After the first three months of babyhood the pullets should be fed on grain, green feed, bone, grit and a little meat in hoppers. No mash or starch food to make flesh; what you want is a good bony structure and a set of healthy, well-developed internal organs. Let them have all the

range you can and teach them to rustle.

Pullets that are raised in this manner and then put on a developing food about a month before you want them to lay, will lay a larger egg; and after they commence, they will keep it up and not go into any winter molt nor indeed any molt until the natural time to molt in the fall.

Then they will molt and take a spell to rest before commencing again. And after they commence to lay they stay with it. This method of loose feeding that causes hens and pullets to molt at every turn is not good. Better find out a good method and then stay with it, not lowering the quality or quantity unless for some good reason such as weather conditions. Now when there is a continued spell of rainy weather and the ground is wet and cold, hard grain is preferable to mash, because it furnishes work for the gizzard and increases the circulation of the blood. If the grain is fed in litter the circulation is increased twice over and the bowels keep in better shape than on soft feed.

**Wet feet and Leghorns** do not harmonize. Cold does not hurt them but wet does; and the man who can shelter his pullets reaps the benefit. When we hatch we should take thought of all these things. Having quantities of hens may be more of a loss than a gain if we feed them several months in the year for them to molt. Molting is an expensive business so we want to avoid it all we can. And it can be brought down to just one molt a year, which is perfectly natural, by hatching at the right time, and keeping proper methods of feeding and raising the stock during the growing period.—Pacific Rural Press.

### THE NEWLY HATCHED CHICK NEEDS GREAT CARE D. O. Barto.

No Part of the Work of Raising Poultry Will Pay Producer Better.

The early care of young chicks is extremely important, for the lack of care may cause exposure to conditions that will prove fatal or at least so seriously handicap their welfare that there will be no profit in raising them.

"When a little chicken, whose embryonic development in the egg has occupied only twenty-one days, breaks out of his shell he is about as delicate a little piece of machinery as one can conceive." At first he looks so bright and active and independent, rolled up in his fluffy covering of down, that one is likely to overestimate his powers of endurance and resistance and expose him to conditions that will prove fatal or so seriously handicap him that there will be no profit in raising him.

"The newly hatched chick comes from the egg where the temperature has been kept within the limits of 102 and 105 degrees. It is unreasonable to think that he can thrive for the next several days in surroundings that are widely different in temperature.

"At first he is little more than a sack of bowels and other organs of digestion and respiration. For about three days after he is freed from the shell he will have all he needs and can do to digest and absorb the yolk of the egg which his body contained

## WILL THEY WEAR?

You can bet they will if they are

### SCOWCROFT'S

"NEVER-RIPS" or "MADERITES"

Any man who has worn them once will always buy them.

Don't let your merchant sell you something he claims is just as good.

You might just as well have the best, so when you buy work clothes insist on getting

### SCOWCROFT'S

"NEVER-RIP" OVERALLS

AND

"MADERITE" WORK SHIRTS

They always give satisfaction.

ASK THE MAN

WHO WEARS THEM

JOHN SCOWCROFT and SONS CO. Mfrs.  
Ogden, Utah.

### A Saddle for \$36 Cash \$45

Our latest Swell Fork Saddle, 14 inch swell front 28-inch wool lined skirt, 3-inch stirrup leather, ¾ rig, made of best oak leather, guaranteed for ten years; beef hide covered, solid steel fork.

**The Fred Mueller Saddle and Harness Co.**

Dept. A.  
1413 Larimer St.  
Denver, Colo.  
Send your name for our 1915 catalogue, now ready.



The Celebrated Mueller Saddle

### SUGAR'S VALUE AS FOOD

Among the chief articles of diet, sugar takes high rank as to the available energy when consumed. Sugar ranks at 98 per cent meat and fish at 87, eggs at 89, dairy products at 93 and vegetables at 95. Sugar that is made in Utah and Idaho is the equal of the most highly refined imported sugar made from cane.

ORDER "TABLE AND PRESERVING" SUGAR

OPENED JAN. 1ST, 1913



"The HOTEL that's BEST In all the WEST"

WHEN IN LOS ANGELES  
STOP at the NEW  
FIRE PROOF  
**HOTEL NORTHERN**  
EUROPEAN  
200 OUTSIDE ROOMS  
150 WITH BATH  
420 W. 2ND ST. NEAR HILL  
NORTHERN HOTEL CO., PROP.  
FRANK L. CRAMPTON, MGR.  
CAFE  
IN CONNECTION  
RATES \$1.00 PER DAY AND UP

when he was hatched. After that period he is dependent on his friends for food.

"This should be easily digestible, clean and nutritious and given in small quantities frequently. The drink, either water or sour milk, should be provided in vessels that can be kept easily clean and such that the chicks cannot wet or soil himself.

"No part of the work of raising poultry will pay better returns than the special care given to the little chicks during the first two weeks of their lives.

"If they are incubator hatched, and therefore in bunches numbering fifty to two hundred, more or less, much more attention is necessary than when they are hatched and mothered by hens.

"The best and most uniformly successful results that the writer has ever known were secured by placing the chicks when first taken from the incubator in boxes made of some material like heavier board, about two by

four feet dimensions, fifty chicks in a box, and keeping them in the windows of a warm living room where they could be under the close observation of the members of the household. For the first three or four days after feeding begins they should be allowed to eat for a short time and then shut back in one end of the box under a light, ventilated cover where they are made to rest as they would do under the mother hen. This frequent resting in warm, comfortable quarters is one of the most important features in starting successfully a brood of chicks.

"This sort of care and fussing with little chicks will not appeal to some people and they would do well to let the other fellow raise the chickens and later buy their stock from him."

Beautifying the home grounds is of large importance. See if you cannot beat your own record this year by improvements along this line.



# THE FARMERS' MARKET PLACE

For the Buyer

This market place offers our subscribers and readers a very good place to advertise. If you have something to sell or want to buy here is the place to tell it. These advertisements are read because they offer bargains, your bargain should be here. Take advantage of this opportunity today.

For the Seller

## Gem Herd of Improved Chester White Swine.

This Herd Bred, Raised and Sold. Both Boar and Sow Grand Champions of the World's Fair held at Frisco this last year. Both Sire and Dam, is still in the herd. If such breeding interests you, write for illustrated catalogue. Stock of all ages for sale at all times.

Address

**GEO. H. LAWSHE**

**Falls City Idaho**

## CHERRY CREEK DAIRY FARM OFFERS YOUNG BULLS

FOR SALE

Herd Sires: Rag Apple Korn-dyke 13th, Grand Champion Utah State Fair 1915. Sire Ray Apple Korndyke. Dam Fairview Mabel Korndyke. A. R. O. record as a Jr. 3 year old 25.51, Bt 4.83 fat. Rag Apple Valerie. Sire Rag Apple Korndyke 13th, Dam, Princess Valerie. A. R. O. record 23.00 Bt from A. R. O. Dams.

**NELSON BROS. Props.**

**Richmond Utah**

## HOLSTEIN BULLS FOR SALE

Sons of Wachusetts Creamelle George the 2nd whos daughters have made from 350 to 500 pounds of butter fat a year just with ordinary care. Wachuett was 2nd prize aged bull at the State Fair last fall and all of his get were first in their class but one. His dam gave 105 pounds of milk in a day that tested better than 4 per cent. No: 1 Iowana George 3rd a fine 18 months old son of Iowana Colanth Alberkerk. A high testing heifer from Iowana Farms, Iowa, her dam has a 19 pound record. This young bull was Junior Champion at the State Fair. The first check for \$200 takes him. No. 2 Wachusetts Beauty a 12 month old son of Maudeline Of Beechwood Beauty with a 23 pound butter fat record, milk test 4.6. She is a full cousin to Colantha 4ths Johana, \$150 buys this one. Take no chances, get a bull from a proven sire and one that has produced the goods. Offer several others from 6 months to 1 year old from \$75 to \$125 each.

**J. W. STUBBS**

**Charleston Utah**

Mention Utah Farmer when you write.

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200	.....	\$1.25
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**LEHI, UTAH**

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## REAL BARGAINS

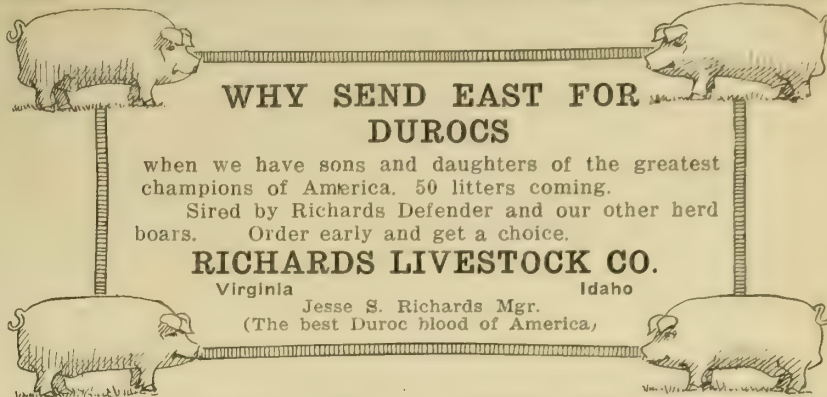
In Dry-Farm Lands, raw or improved, I can place them for you. They must be good in quality, cheap in price.

Write me full description and character of lands, stating lowest price.

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**J. W. PAXMAN**

**Nephi Utah**



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when we have sons and daughters of the greatest champions of America. 50 litters coming.

Sired by Richards Defender and our other herd boars. Order early and get a choice.

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Jesse S. Richards Mgr.  
(The best Duroc blood of America)

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White Leghorns, Brown Leghorns, Barred Rocks, R. I. Reds, Black Minorcas, Anconas, Buff and White Orphingtons. Prices on application.

**THE ORLAND HATCHERY**  
Orland, Glenn Co. California

**4—BEST LAYING STRAINS—4**  
Rose Comb Rhode Island Reds and White Wyandottes, Single Comb Black Minorcas and White Leghorns. Egg fertility and stock guaranteed. Write your wants. E. C. Blanpied, Box 60, Milford Utah.

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From our own S. C. White Leghorns, selected as layers from stock "bred to lay" for four generations. Eggs for hatching from these and S. C. R. I. Reds. Book orders now. Bates and Sons, Provo, Utah, R. F. D. No. 1—Box 310. Breeders of Airedale Dogs. Write us.

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Single Comb White Leghorns. The kind that pay for five or six years. Especially bred for long profitable service. Send for booklet. Early orders insure your wants.

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**Pure Bred Unrelated DUROC JERSEY PIGS FOR SALE \$5.00 apiece.**

**H. RONNENBERG**

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Lumber, Cedar Posts, Millwork. Save big money, guaranteed quality. Write for price lists or send bill of material for quick estimate. Farm Buildings Plan Booklet free. Western Lumber and Millwork Company, Tacoma, Washington.

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**Registered Duroc Jerseys**  
100 fine, youngsters and some fine brood sows.

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## FOR SALE CHEAP

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Wanted to hear from owner of good farm for sale. State cash price and description. D. F. Bush, Minneapolis, Minn.

Don't be afraid of telling the good things about your business too often. If your merchandise has good qualities, enumerate them, repeat them, tell them again and again, for it is the good qualities that appeal to people and create a desire for the things you have to sell.—Exchange.



## Taylor Brothers Snaps

160 Acres—Red Sandy Loam—On bench near Randlett, Uinta County, Utah. Paid up water right that cost more than \$1100.00.

Price—everything included \$1500.00.

160 Acres—Partial water right, balance Dry Farm. Good improvements. Some stock, implements, etc. Near Daniels, Oneida County, Idaho.

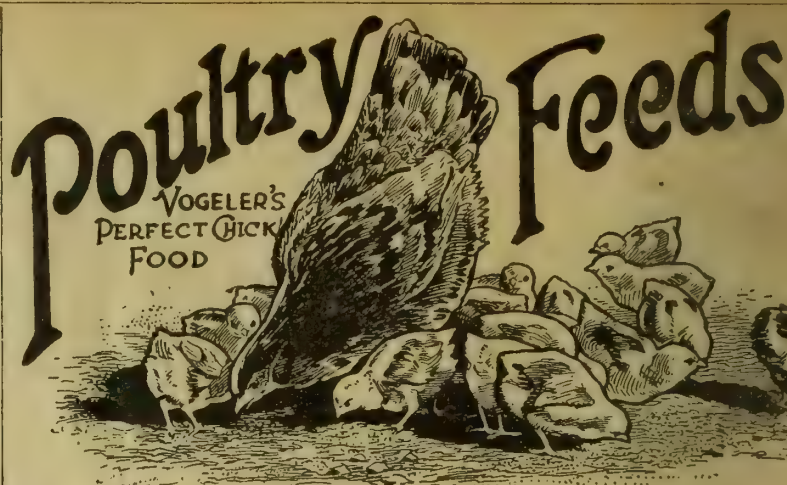
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960 Acre Dry Farm in famous Blue Creek District, Box Elder County, Utah. Well water for culinary purposes. More than 700 acres now in wheat and alfalfa. This years crop assured and will practically pay for land. Property all fenced and in splendid shape.

Price \$30.00 per acre.

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## Vogeler's Perfect Chick Food

Our chick food is a perfect balanced ration, contains ten varieties of grains and seeds, it means early development of the pullets and early marketing of the cockerels, its feeding means life insurance to the chicks and big profit to the poultry raiser. Buy by the sack, 100 pounds \$3.00. Order a sack today and make money out of the poultry business.

## Vogeler Seed Co.

SALT LAKE CITY

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IN YOUR ORCHARD BY APPLYING

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One pound of "Corona Dry" will do the work of three pounds of paste and do it better. It can be kept indefinitely; will not freeze, dry out, cake or lose its strength. It is a chemically pure arsenate of lead in a patent powdered form. Sticks to the leaves longer and gives better protection.

Best thing ever discovered to destroy Potato Bugs, Corn Ear Worm, Currant Worm and dozens of other pests. Kills every leaf-eating insect that infests fruits or shade trees.

Write for free Booklet on Control of Garden and Orchard Pests. It contains a vital message for YOU.

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Seed and Nursery Specialists  
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As a consequence, the Union Pacific System has been brought to a state of operating regularity—the effects of which are felt through every channel of the service; the work goes on from day to day, and the public is assured of the full benefits resulting therefrom—

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SALT LAKE CITY, UTAH.



UTAH FARMER

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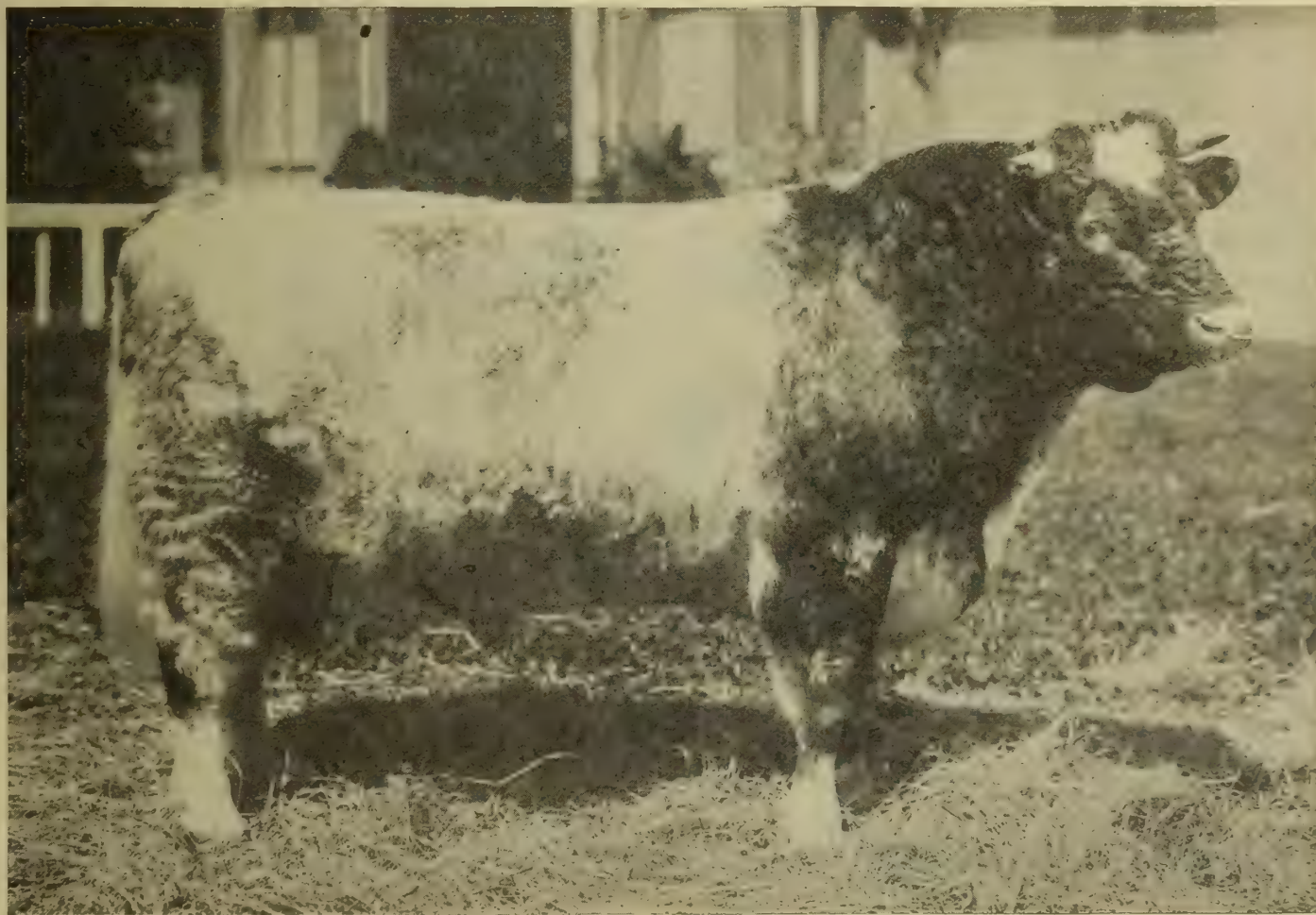
Devoted to Agriculture in the Rocky Mountain Region

OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE

VOLUME XII; No. 41

LEHI AND SALT LAKE CITY, UTAH

MAY 13, 1916



**THE SHORTHORN BULL "AMERICUS"**

He was sold in Argentina for \$38,983 in American gold, one of the highest prices ever paid for a bull of any beef breeds. His dam was Merry Ravenwood 3rd and he was bred in Missouri.



## Mother's Way

It was my good fortune during the closing days of last June to receive an invitation to visit some relations.

Our host, a stranger to us, was a genial man nearing middle life who by dint of energy and thrift had left the bread-and-butter question a long way back on the road.

A gentle, midday shower had freshened up the landscape and the shady porch and easy chairs seemed to invite informal after-dinner conversation. From the annual commencement festivities we naturally drifted to the proper equipment of young people for life. Soon we discovered that here again was a successful man who felt that "all that I am I owe to my mother." It took but a few questions to draw from him his description of "mother's way."

"The first time I ever earned a whole dollar was on the third of July when I was a little more than nine years old. A woman driving out from town said she wanted 2 bushels of cherries to make pies for a restaurant she was going to run on the Fourth. Mother said she had the cherries, but as she was planning to take a picnic dinner to the celebration she had no time to pick them. The friend was greatly disappointed, and so my mother asked her to wait a while and she would see if she could not help her out. She came out into the wood-yard where my brother, a year younger, and I were and asked, 'Boys, do you want to earn some spending money? Tomorrow is the Fourth, you know.' She then told us if we would pick the 2 bushels of cherries we should have all the money, which meant a dollar apiece.

"We went to work with a will, encouraged from time to time by mother's lending a hand and telling us of the good we were doing the friends. No dollar can ever look as big to me as that one did as it lay in my hand. At supper I almost stopped biting a piece out of my custard pie to see if it were in my pocket.

"Before going to bed that night mother asked us how much we expected to spend. I told her 10 cents was the most I had ever had. My brother said he wanted to spend as much as 15 cents. Mother let us plan to our hearts' content while she laid out our Sunday clothes for us. Finally she said, 'Well, I think so long as you have your dinners with us 15 cents ought to be plenty. I will lend you 15 cents apiece until you pay me in popcorn, and then keep your dollars for you.'

"That wiped out the picture of letting the neighbor boys see me with a whole dollar to pass across the counter for a 5-cent dish of ice cream, but I thought the matter over carefully and decided to take her advice. Of course, father treated us to fire-crackers and torpedoes, so our wants were abundantly supplied by the time we had been helped to mother's fried chicken and rolls and jelly and pound cake and cream pie; I mean the genuine article, not blue milk thickened with corn starch and crusted over with sweetened egg.

"A great many discussions followed that summer as to what was to be done with that money. Let me say right now that before school opened I had learned a great deal from mother

about interest. She explained how foolish it was to hoard money instead of getting it to working and earning for you. The momentous question was finally settled: We were each to buy a pig, provided father would sell to us. A little judicious steering procured for us two choice pigs, conspicuous from the many others for their beautiful spots.

"Many happy hours we two brothers spent sitting on top of the fence watching our live stock grow. Our parents made it clear to us that they must be well fed. Soon the entire lot was turned over to us to feed. Two happier boys never lived on an Indiana farm than we were when each pig presented her owner with a fine family. The litters were not equal and again mother directed and our interests were pooled. When the young ones were ready for market mother suggested that we trade our interest in swine to father for calves. Bear in mind that since the day we bought the two little spotted creatures we had been studying practical agriculture and nearly all of the hog-feeding had been done by us. The deal went through and we owned 7 beautiful calves of a herd of many. Father was to board them free of charge, if we would help take care of all of them. The game was repeated. Our calves must be well cared for or they would be a loss to us. I often smile at the fun our elders had at our expense. We certainly did lug and tug at hay and fodder and bedding for our calves. You will anticipate the next step probably, remembering that we now understood pretty well the feeding and general care of hogs and calves.

"Mother suggested that if we could get some nice, young cows that would be having little calves it would seem more like making money. Of course we bit. She negotiated the exchange of our 7 yearlings for 4 beautiful heifers soon to be fresh. We were then face to face with the farm dairy work and lessons were begun at once.

"After working hard 3 years with milk cows we closed out our interest to father for 25 ewes apiece. Then followed the shearing, the dipping and the care of the young lambs.

"I must not tire you with details, but step by step my mother, with father as a silent partner, taught us the laboratory method of farming. She never permitted us to overwork or to become discouraged. She insisted upon our school being first consideration during its sessions, and when we spelled down the school a substantial contribution was added to our saddle-pony fund. Our flock of sheep and increase were with father's and as all were to be herded he shared in the purchase price of the ponies.

"I want to ask you if there is greater happiness here on earth than in the heart of a country boy riding his own horse to town on Saturday afternoon with a new saddle, bridle and whip? And, say, if the bridle has martingales there's nothing else to be wished for.

"I could spend the rest of the day showing how mother's way worked out until when we were of age we each owned a fine roadster and carriage and about \$500 worth of live stock.

(Continued on page 14)

## LET THE CHILDREN STUDY MUSIC

IT MAKES BETTER CHILDREN OUT OF THEM  
AND THEY WILL APPRECIATE IT WHEN  
THEY GROW UP.

Music makes the Home Life pleasant. The entertainment they will provide and the enjoyment you will get out of their ability, in your declining years, will more than recompense you.

### START THEM NOW---BY MAIL

Our courses of instruction are written by the best talent that can be gotten together and are endorsed by the leading instructors of the West.

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By Prof. J. J. McClellan.

Compiled by this eminent performer and instructor—the course is written in an easily understood form—particularly for beginners. One that gives the student the benefit of his many years of successful experience as a teacher.

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YOUR YOUNG FOLKS?

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Get the information regarding our courses.  
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Templeton Building

Salt Lake City, Utah

MAIL THIS COUPON TO US—TODAY

UTAH CONSERVATORY OF MUSIC

Templeton Building, Salt Lake City, Utah.

Gentlemen:—Send free—information regarding the course checked.  
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VOLUME XII. LEHI, UTAH, SATURDAY, MAY 13, 1916 No. 41

## Trees Control Water Supply Western Valleys

Prof. J. H. Paul, U. of U.

Extensive planting of trees which is necessary to insure a permanent supply of water throughout the summer in the valleys of the West, means reforestation and new forestation on a large scale. What is needed will be trees not merely by the hundreds or thousand, but by millions and hundreds of millions. Such numbers of trees will be called for in the near future. Real reforestation is a work that will tax our resources and occupy the statesmanship of leaders for years to come. But later, when the forest crop begins to mature and the water supply of the valley is rendered more permanent, more abundant, and more uniformly distributed throughout the year, the results of the policy here advocated will be so beneficial, so apparent, so widespread in their effects, that none will regret the labor and expense necessary for the ends accomplished.

### Trees in Valleys and Towns.

In our valley forestation is practicable and on a comparatively large scale. Every area moist enough to give trees a start will suffice for the practical creation of a grove. Along every water course certain trees should be planted, if only cottonwoods and poplars. This may be done by order of city and county commissioners. No city officials in the future should permit any of the sidewalks within the city, except those on the streets of heavy business traffic, to be devoid of shade trees.

Many kinds of trees are suitable for the city shade, especially maple ash, sycamores, linden, black walnut, and, above all, the English walnut, that has been acclimated to our region. The Harwoods, of Salt Lake, have succeeded in developing strains of these splendid trees that do not winter-kill with the frosts of Salt Lake valley. The trees are beautiful in foliage, massive and oaklike in appearance, and bear in seven to ten years from the time of planting, an annual crop of perhaps a hundred pounds of nuts.

Among evergreens, the world has not produced anything else so fine as the blue or Colorado spruce, and our Rocky Mountain and Utah junipers. Then there are the yellow pine and the Douglas firs for the larger trees. These may all be grown with success by those who desire evergreens—and who does not?

To the end that the valleys of our region may be beautiful—rich with groves of timber, including evergreens and hardwoods—and that the water supply of these valleys may be

(Continued on page 10)

## A Permanent Highway For Utah County

By Wm. F. Long.



**E**XTREMES in rural transportation meet when a mudhole road intersects or parallels an interurban railway. Concrete is bringing mudhole roads up to modern requirements.



**Y**OU can permanently solve the road problem in your community with concrete roads like the one you see here. Once built, it is there to stay, free from dust in dry weather and mud in wet weather, and it will be open to traffic 365 days in the year.

A few years ago an agitation was started in Utah County for the construction of approximately 50 miles of permanent highway to stretch from Santaquin on the south to the extreme northern limits of the county. For some reason of other no definite action was ever taken to promote this scheme.

If the tax-paying citizens of the county would but investigate and study for themselves the advantages to be gained from a improvement of this nature, they to a man would be decidedly in favor of the proposition, they would not wait for a leader to, raise out of the multitude to head the movement, but would themselves seize the opportunity and demand of the "powers that be," that the proposition go through forthwith.

"How much will it cost, and how am I going to pay for such an extensive improvement?" are questions of vital importance—questions which must first be answered in the minds of the people—the tax-paying citizens, before the proposition can be either intelligently accepted or rejected.

Buying a hard surface pavement or highway, is like buying any other improvement or commodity—a silo, a cream separator, a gasoline engine, etc. The prospective buyer must first be convinced of the advantages of these things—must understand for himself how these "new wrinkles" will save him actual dollars and cents, and then if understanding, and having been convinced of their superior value and economy, he does not purchase—well, he may be likened to the man in the Biblical fable, who took his little talent and buried it in the ground.—To conserve one's resources, and to make the best of one's opportunities, should be the duty of every live, wide awake, progressive citizen.

It is the purpose of this article to point out to the tax-payer some of the real monetary advantages to be derived by constructing in Utan County a permanent hard surfaced highway, running from the northern to the southern boundry limits. He should then investigate for himself the truth of the subsequent remarks.

What will 50 miles of permanent highway cost the individual taxpayer of this county? is the first important question. Such a highway in round numbers will cost \$13,000 per mile. Since this type of road-way will last from 30 to 50 years, why not permit of our children, who will derive its benefits as well as ourselves, to help pay for it? This proposition is but

(Continued on page 12)



## LIVE STOCK

### FIGHT TO PREVENT

#### HOG CHOLERA

There Is an Annual Loss of Over \$65,000,000 in United States Due to Hog Cholera.

As the result of much study and observation in connection with the slaughter of large numbers of hogs at packing houses under United States Government Inspection, we deem the following observations of much importance, not only to farmers and stockmen, but the people in general:

1st. Don't accept any so-called drugs or chemical cures for hog cholera. There are a great many fake cures for cholera. Report fakes to State or Federal authorities.

2nd. In the use of serum, all forces must co-operate and get farmers to use only serum manufactured and sold by firms having a Federal or State license.

3rd. If good hogs are taken in time before they have been exposed to cholera, and treated with serum with the single method, one can save about 90 per cent of his lot. Of the sick hogs, about 65 per cent.

4th. Hire a veterinarian by the day. This is the cheapest and best way to have work done. If the farmer has only a small number of hogs he can get together with some of his neighbors and between them employ a veterinarian.

5th. Where cholera is apparent, immediately isolate the affected hogs, and treat them with a maximum dose of serum only, then treat all other hogs which have been exposed, with the average dose. Use all sanitary precautions possible; see that there is no communication between infected premises and the outside.

6th. In a great many cases cholera is brought on a farm by bringing on breeding stock.

7th. Quarantine all hogs purchased from a distance for at least thirty days before turning them in with the old herd or hogs on the farm.

8th. When you use virus on a hog, you expose him to cholera. There are laws in a number of states prohibiting the use of virus.

9th. Improper serum, the use of dirty syringes accompanied by general unsanitary conditions after treatment will result in serious damage.

10th. As the proper area for inoculation is still an open question,

some other place than the ham should be designated as suitable for the purpose. There is a probability of ham inoculation causing abscesses not discoverable until the ham is sliced for use.

### KINDNESS PAYS IN CARE

#### OF CALF

E. L. Vincent.

What kind of treatment does he get at your barn? Does he amount to anything? Or is he simply a nuisance, all the time in the way, and kicked and cuffed about every time you go near him? That is what some calves get; and that is the reason, in large part, why so many calves do not make better cows.

Now, a calf is one of the most important members of the farm economy. You step out today and see what you will have to pay for a cow! When you come home you will have your mind made up that the one that goes out on that kind of business must have a good-size purse, and if he buys that pure will look as if an elephant had stepped on it.

Probably, too, when that man gets back from his trip he will say, "Going to raise more calves. They're as good as the wheat." But while many do say that, when they are looking for cows, they forget it or neglect it when their calves are coming along. Then it seems "too much bother." They would rather buy their cows already raised. Takes too long to grow a calf; and so the nice calves go for veal, as they bring a good price, or even for the hide, when only a day or two old.

But it would pay us all to raise every calf we can. More than that, if we do not do it, there will in a few years be a greater shortage of dairy cows than there is now. Everywhere, all over the country we hear the cry, "We must have more cows. Do you know where we can get any?"

But the will to raise calves is not all there is of it. There must be good care and the best of feed, together with a dry place to lie all the time. Many calves actually suffer from the treatment given them by their owners. They are never comfortable, especially in cold weather. Their beds are always soaking wet. They shiver and shake with the cold, and every shiver costs something in feed and flesh. For comfort means growth.

Then, too, the calf ought to have enough to eat and that which is good and wholesome. For the first four weeks we like our calves to have new milk, right from the cow. It always ought to be warm, no matter whether fresh or skimmed. After the four weeks are passed, the new milk may be gradually passed for skimmed milk. It would take a week to bring about this change, every day holding back a little of the sweet and adding more of the skimmed. But for some time the skimmed milk should be sweet.

To make up for the goodness that has been taken out of the milk by skimming feed some grain. This ought to be fed dry, and never dropped into the milk as so many do. It is better for the digestion when taken dry. The calf will soon learn to lick it out of a box.

Then, too, some nice bright hay will be a great help. It is wonderful how soon the calf will learn to nibble at hay. We like to put it in a potato crate and let them work at it as they have a mind to. You will be surprised how soon the calves will call for the hay and eat it down like old cows.

Above all, kindness pays. You may be a bit short of feed sometimes, but there is never any need of lacking kindness and the money value of good treatment no one ever yet has computed.

### RESULTS OF LAMB

#### FEEDING EXPERIMENT

Of the seven lots of twenty lambs each in a recent feeding experiment at the Agricultural Experiment Station of Nebraska, the lot running on grass and finished the last four weeks on a heavy feed of corn and oil meal made the most economical gain, the cost per hundred pounds of gain being \$5.13. The following are the other lots and rations ranked according to cost of 100 pounds gain:

Rape pasture first month, then corn, alfalfa, and turnips. Cost \$6.51.

Corn in the field plus one-third pound of cottonseed cake per head daily the last eight weeks and alfalfa hay after the freeze. Cost \$6.60.

Shelled corn, alfalfa hay, and corn silage. Cost \$6.79.

Shelled corn and alfalfa hay. Cost \$6.93.

Corn in the field and alfalfa hay after frost. Cost \$6.98.

Corn in the field plus one-third pound of oil meal per head daily the last eight weeks and alfalfa hay after the frost. Cost \$7.47.

The prices used were: Old corn, 65 cents per bushel; new corn in the field, 46 cents per bushel; alfalfa, \$8 per ton; corn silage, \$4 per ton; turnips, .4 per ton; oil meal, \$40 per ton; cottonseed cake, \$25 per ton; oats, 25 cents per bushel; grass pasture and rape pasture, each three cents per week. When sold, the lambs returned a margin of \$1.25 per hundred weight over the first cost at the stockyards.

### WHY NOT A SILO.

The silo has now been in general use for a quarter of a century, and it has proven a success. The men who have not found it so have not used it in the proper way, or have made some mistakes, which accounts for the failure. This has been so thoroughly and completely demonstrated that it is a mystery why some men still shake their heads.

In a recent investigation carried on in Wisconsin by Messrs. Watrud and Rauschenstein, members of the Agricultural College, a most conclusive proof of the value of the silo was demonstrated. They studied 78 farms, half of them where the silo was used and the other half where it was not. The final conclusion showed the average income on the farm where the silo was used was \$153.00 greater than where the silo was not used. These figures were given after all expenses and costs were deducted, so they could be called net profits. They also found the return per cow, where the silo was used was \$11.00 per year greater than where it was not used. This would mean on a farm where 25 cows were kept, the silo would earn \$275.00, or about the price of an

average silo, which would mean a silo would pay for itself on such a farm in one year. These figures were taken with great care where all farm operations were included in the problem.

The farmers of Wisconsin have not only found out the truth in regard to silos, but they have been wise enough to take advantage of these benefits. Wisconsin has at least 55,000 silos in use today. There are districts where the silo can be found on every stock farm, and whole counties where practically the entire corn crop goes in to the silo. Such demonstrations should be sufficient proof for stock men to figure carefully on the silo problem.

THE CHANCES ARE YOU WOULD buy an automobile if you got a bargain for your money, wouldn't you, Mr. Man? Of course you would. Another thing, you would buy quicker if you knew whom you were dealing with. Below are bargains in our Used Cars that are in first-class mechanical condition and ready for immediate use. Remember, we stand back of these cars. Now, if you are really looking for a bargain, come down and see us, ask for our Mr. Cherry, Mgr. Used Car Department, who will be glad to demonstrate or answer any questions in regard to these cars. Liberal terms to responsible parties:

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Buick, C 36, Roadster, 35 hp., e. and s.  
E-M-F 1912, 5-pass.  
E-M-F, 1912, 5-pass.

Reo, 1910, E, 5-pass.  
Overland, 1913, 5-pass.

Overland, 1914, e. and s., 5-pass.  
Paige, 5-pass., e. and s.

Paige, 5-pass., e. and s.  
Paige roadster, 5-pass., e. and s.

Studebaker, 1913, e. and s., 7-pass.  
Velje, 1914, e. and s., 5-pass.

Chalmers, 1910, 5-pass.  
Stoddard, 1912, 5-pass.

Wiley 1-ton truck.  
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Cadillac, 1913, 5-pass.  
Cadillac, 1911, 5-pass.

Franklin, 1912, 7-pass.  
Oakland 1910, 5-pass.

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# Wire Worms

## Destructive Pests

**Different Control Measures Recommended by Department of Agriculture For Different Species.**

True wireworms are reckoned by specialists in the United States Department of Agriculture as among the five worst pests to corn and among the twelve worst pests to wheat and oats. They attack many other crops as well, however, notably potatoes and sugar beets, and are considered one of the two most difficult groups of insects to control. To combat them successfully it is essential that the farmer should be able to recognize the various species and to distinguish them from other insects of somewhat similar appearance.

Wireworms are the young or worm stage of several kinds of hard-shelled beetles, popularly known as "click-beetles," "skipping jacks," "snapping beetles," etc. In various parts of the country the name is incorrectly applied to "thousand leggers," webworms and other insects. The true wireworms, though differing greatly in size according to kind, are always elongate, more or less cylindrical, and with a highly polished skin. They have three pairs of short legs near the head end of the body and are usually yellow or reddish brown in color. Several of the most destructive varieties are described in the bulletin already mentioned. One or more of these are found in practically every part of the United States and much of the reseeding and replanting that farmers have to do is made necessary by their ravages. As each variety has its own habits, different methods of control must be used for the different groups.

**The Dry Land Wireworm and the Inflated Wireworm of the West.**

These insects, which are very similar in appearance, seem to be confined to the dry farming regions of the Northwest and to the wheat regions of the northern Middle West. They spend two full summers and a part of the third in the ground, transforming to beetles during July and August of the third summer. The beetles, however, do not come out from the ground until the fourth spring. In the dry-land regions this wireworm feeds only during spring. The hot, dry months it passes at a depth of from 4 to 8 inches below the surface. This habit makes it possible to control the pest by breaking up the soil in the hot months. The resting wireworms that are not actually crushed by the cultivation will soon succumb to drying when their cells are broken open. In infested regions in the Northwest, therefore, farmers are recommended to disk or drag harrow the summer fallow as early as possible in the spring in order to produce a dust mulch. The disking should be continued as often as is necessary to maintain this mulch and to keep down the weeds. In July or early in August the summer fallow should be plowed and immediately afterwards dragged. As soon as the crop is removed, the stubble should be plowed. This method of handling land will not only kill off many of the insects, but will materially reduce the weeds. The early disking merely softens the soil

and allows the weed seeds to sprout. These are subsequently destroyed by the summer plowing.

In conclusion, the new bulletin of the Department of Agriculture points out that various so-called remedies for wireworms have been found quite useless. Among these is the use of various substances upon the seed corn and wheat. Certain commercial fertilizers which have been recommended as insecticides have also proved worthless in this respect. The application of lime is not effective as an insecticide, but is of value in rendering the soil more easily drained. Late fall plowing appears to be without effect. Trapping the worms with baits of poisoned vegetables is impracticable in the case of field crops, although it may be of some value in intensive farming.

### SUDAN GRASS.

J. C. Hackleman, Missouri A. C.

Tests of Sudan grass by the Missouri Agricultural Experiment Station during the last two years indicate that this new crop will be of value to Missouri farmers especially in the southern part of the state. Seed may be secured from any reliable seedsman but it is well to take the precaution of buying northern grown seed so as to avoid the possibility of introducing Johnson grass.

Sudan grass is a tall, rank growing, annual grass closely related to the cultivated sorghums and resembling Johnson grass. It differs from Johnson grass, however, in not possessing the heavy root stalks or underground stems which make Johnson grass so difficult to eradicate in those regions which are well suited for its production. The plants average from 3 to 5 feet in height when drilled or broadcast and have stems a little larger than a lead pencil. If grown in rows and cultivated, it reaches a height of from 6 to 9 feet on good soil with a corresponding increase in the size of the stems. When planted thinly it stools very freely. Sometimes producing as many as 100 stems from one crown.

Like the other sorghums, Sudan grass does best in a warm climate. It should not be planted until all danger of frost is past and the ground thoroughly warmed. It is decidedly drought resistant, which makes it well suited for the semi-arid regions of the southwest. It is also being grown with success in the more humid regions but it has not attracted as much attention there as in the drier sections where there are not so many other good hay plants. Two cuttings are usually made and under very favorable conditions sometimes three or four. It has rather wide adaptations as regards soil, growing successfully on almost every soil from a heavy clay to a light sand. It does best, however, on a rich well drained loam.

Two methods of seeding are practiced, broadcasting or drilling solid, or drilling in rows to be cultivated. An ordinary grain drill may be used and the seed covered from one-half to one inch deep. Where drilled in rows a sufficient number of the holes are stopped up to put the rows the proper distance apart. Where an ordin-

ary corn cultivator is to be used, the rows should be from 36 to 42 inches apart. Where seeded broadcast from 20 to 25 pounds of seed to the acre are required, while seeding with a drill requires about five pounds less. If seeded in rows 4 to 5 pounds is sufficient.

It is customary to cut it for hay just after full bloom and to cure in light windrows and small cocks. It may also be harvested with a binder and cured in shocks. Where grown for seed it is usually harvested with a grain binder when the first heads are fully ripe.

Long prayers are all right—when said privately or in secret but in public

or before congregations they are wrong and may lead to the verge of depravity, since some one in that congregation may be sitting on a tack. Uncle Ben.

The mill can not grind with the water that is past, neither can the crops grow with the water that evaporates. Head off the evaporation by cultivation.

**EAR PERFECT TAGS**  
Samples Free  
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#### OUR GUARANTEE

We guarantee every subscriber against loss thru dishonesty or attempted swindle by any advertiser in this publication. We do not attempt, however, to adjust trifling differences between the subscribers and honest responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within thirty days from date of the transaction, and the subscriber must have mentioned Utah Farmer when writing the advertiser.

**Advertising Rates**—The advertising rates will be sent upon application.

Watch for those first flies that come out on a warm day. Kill every one of them and help make your town "flyless."

We all live in glass houses; not always transparent, but always brittle so that a stone we throw may rebound and smash our own.

Modern Machinery is a big help to the farmer. For instance, the cream separator will soon pay for itself, through the saving of butter fat, many other examples might be given.

The harness should be adjusted to fit the horse. Most of us throw a harness on, little thinking of how this strap may be too short and the other too long. Many sores are caused by the undue chafing of short straps. Hame straps should receive especial attention.

Thrift and industry should be taught to our children. One of the best ways to do this is to commence a savings bank account for them, and encourage them in the habit of regularly and systematically putting away some of their money. Children should not be allowed to spend all of their nickles and dimes for candies and movies, but should be taught the value of thrift and industry by saving.

How much unprofitable land have you? Small pieces of ground that produce nothing but weeds. The corners, ditch banks and along the fences. Plant this unprofitable ground and let

it produce something. Do anything with it rather than let weeds grow and seed your farm. Think for a moment and you can yourself suggest a number of things that could be profitably raised instead of allowing weeds to grow on it.

Manure in the stable will not grow a big crop of anything but germs and disease. If you want to use manure at a profit, see that it is put out on the farm. Some people evidently believe, from the looks of their cows, that manure will stimulate a growth of hair on the hind quarters of their stock. Manure is valuable if it is used properly, if it is not taken care of, however, particularly during the summer months, it is one of the greatest breeding places for flies. You should bear the results cheerfully, should you have great numbers of these pests around your home, if you know at the same time that you have a big manure pile close to the house that should have been hauled onto the farm.

Much depends on the proper care and feeding given to young animals when the best results are desired. No colts or calves can mature into large fully developed animals if they are stunted in their early growth. The result of good care and feeding is very forcibly shown when a study is made. Some recent tests made at one of the Experiment Stations shows that the value of mature animals which have had the proper care and feeding while they were young is nearly double that of young animals which had received the usual farm treatment. If young animals are stunted, they never reach their maximum development. It will pay, and pay well, to see that young animals are not stunted.

An outbreak of hog cholera is reported in Salt Lake County. The strictest care must be taken or it will spread. Utah has had very little hog cholera and we hope that this outbreak in Salt Lake County will soon be under control. It does not take long for this dreaded disease to go through a herd of hogs and take the most or all of them. Neighbor farmers should not go and see what it is like, you may carry the germs back to your farm. Watch the dogs so they will not go from one farm to another. Co-operate with those who have the cholera on their farm to see that it goes no further.

This week we received a letter from one of our advertisers, telling us what good returns he had obtained from an advertisement in the Utah Farmer. We have told our readers a number of times that the way to make the Farmer grow is to support those who advertise in our paper. We are very careful about the ads that appear in our columns, being the only paper in the State that guarantees our subscribers against loss by dealing with our advertisers either direct or through the dealers. Don't be afraid to answer the ads, when they tell you to write for catalogue do it. When they say you can buy it at the local dealer ask him for it and tell him you saw it advertised in the Utah Farmer. This will help you and help us also.

#### CHICKENS ON THE FARM

Does it pay to keep chickens on the farm? You have heard this question asked and answered many times.

One of the best answers to this question is the

thousands of grocery bills that are paid with the eggs from the farm and in many cases the chickens are not provided any special care. How about furnishing the table and home with eggs for eating and cooking.

A large percent of all the chickens on the farm have free range and "pick up" the greater part of their food. The "coops" or sheds are only sprayed about twice a year. No particular attention is given to breeding, the average farm chicken is a cross or mongrel.

With all this seeming neglect the farm chickens are paying the store and other small bills. Now what would they return if each farm had about 200 purebred chickens that were given a little attention, a better place to keep them and were provided regularly with better food. It does pay to have chickens on the farm.

#### MOTHERS' DAY

Sunday, May 14, will be celebrated as Mothers' Day. Many of the churches will hold special programs, and the Sunday Schools will devote part of their time to inspiring in the hearts of the young people a love for mother.

It seems to us that it should not be necessary to set apart a special day in order to show the respect, confidence, and love that is due our mother, but much good will come from emphasizing in every way, Mothers' Day.

Wonderful changes have taken place in the last few years on the farms in the way of providing help, and modern conveniences for mother, and this spirit of co-operation between father and mother, (the farm and the home) is only just begun. The world has been slow to appreciate in any commensurate degree the extent of its debt to the women of the farm, and it has been awakened to it in the last few years. This awakening has been expressed in a practical way in various movements for the betterment of agricultural and rural life.

Celebrate Mothers' Day and make her just as happy as it is possible to do, not only one day in the year, but every day.

#### MAKING THE FARM INTERESTING

The season is at hand when the farm boys and girls will, most of them, be released from school duties and will spend several months at home. The summer months give just as large an opportunity to make the farm home attractive as do the less busy days of winter.

It is not necessary that the boy or girl should work all his time while he is at home. Boys and girls in the cities do not do so except in the slums, and the average farmer has more means than the average city resident. Some time, definitely set off if possible, should be allowed for play.

Then, too, part of the work that the children do at home ought to yield a definite return of money or something else to them. They should have, perhaps, bits of garden which they should plan and cultivate, and from which they should obtain the profits, or the raising of a few farm animals may be worth while. A girl may be interested in planning and cultivating a flower garden and providing flowers for the farm home and the church which the family attends.

All these things give children pleasure and at the same time give them an interest which is likely to become permanent in the work and life of the farm.—Kansas Industrialist.



**CONTROL POTATO SCAB.**

Select Clean, Disease-free Seed Potatoes—Disinfection Treatment Is an Added Precaution.

(One of our readers sent in a question asking for treatment of seed potatoes, this article send out by the U. S. Department of Agriculture will answer it.)

The treatment of seed potatoes with formaldehyde or with corrosive sublimate has been recommended for many years as a preventive of scab and other diseases carried on the tubers.

Such treatment is, on the whole, profitable, but has several limitations which should be clearly recognized to prevent disappointment, according to specialists of the department. The object of disinfecting seed potatoes is to destroy the germs of scab and other surface parasites which might otherwise be planted with the seed and infect the new crop. Only surface infections are reached by this method. It is only partially effective against deep pits of common scab. Formaldehyde is less effective than corrosive sublimate against the black sclerotia or resting bodies of Rhizoctonia, or russet scab, and against powder scab. Neither chemical, as ordinarily used, will destroy silver scurf. Either one will kill surface infections of blackleg, but neither will reach the internal infections common in tubers from blackleg hills. Neither fusarium wilt nor late blight infection in potato tubers can be reached by any seed treatment, nor can any of the nonparasitic disease of potatoes, such as mosaic leaf roll, and curly dwarf, be prevented. See Farmers' Bulletin 544 for descriptions of these troubles.

Clearly, therefore, the most important precaution against these diseases is to select clean, disease-free seed potatoes from healthy, vigorous plants, as determined by field inspection during the growing season and at harvest. Seed treatment should then be applied as an additional precaution. It will not be effective, how-

ever, if the soil where the potatoes are to be planted is already full of disease.

**Soil Conditions and Potato Diseases.**

Soil conditions have an important relation to potato tuber diseases, and many of these are widely spread throughout the country, perhaps native to some soils. Common scab is favored by a neutral or slightly alkaline soil, and seldom gives trouble in acid soils. It is therefore increased by liming and by fresh stable manure, wood ashes, and alkaline fertilizers, such as nitrate of soda and ground bone, while acid phosphate and sulphate of ammonia tends to diminish scab.

Rhizoctonia occurs to some extent in nearly all soils, but appears to attack potatoes most when the conditions are unfavorable to the best development of the potato plant. Bring the land to an ideal state of tilth to minimize loss from Rhizoctonia.

Powdery scab is worst on cold, wet, or poorly drained soils. Blackleg, on the other hand, is carried by infected seed. No potatoes showing a deep brown discoloration at the stem end should be planted.

Sulphur tends to prevent common scab. It is not a substitute for corrosive sublimate for formaldehyde, but is a good drier for cut seed. Applied to scab-infected soils at the rate of 500 pounds per acre it reduces the scab, but such heavy applications can not be generally recommended as profitable. Preliminary experimental trials are advised.

**How to Disinfect Seed.**

The formaldehyde treatment consists in soaking the potatoes, before cutting, for two hours in a solution made by adding 1 pint of formaldehyde to 30 gallons of water. The solution can be used repeatedly. The gas treatment is no longer recommended.

Corrosive sublimate is used at the rate of 1-1,000 for one and one-half to two hours. Dissolve 2 ounces of the salt in hot water and dilute to 15 gallons. This is a deadly poison. Use with great care. It must also be kept in wood, porcelain, or glass vessels, as it attacks metal. It is more effective than formaldehyde, particularly against Rhizoctonia and powdery scab. Do not use the same solution more than three times, as the strength diminishes with each lot of potatoes soaked.

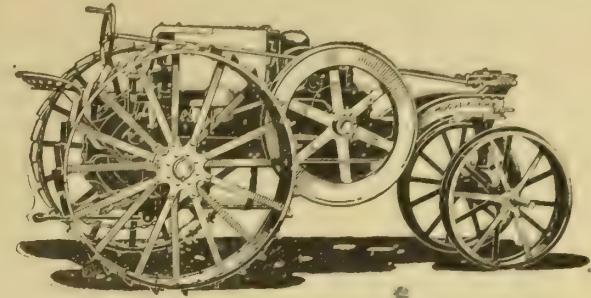
To treat large quantities, set several barrels on a slightly elevated platform. Fit a plug in a hole in the bottom of each barrel, fill with potatoes, cover with solution, let stand two hours, draw off solution, and pour into another barrel. Increase the number of barrels in proportion to the quantity to be treated. Another method is to use a large wooden vat or trough, into which the potatoes in sacks are lowered by a rope and pulley and later hauled out, drained, and dried on slatted racks.

Seed potatoes may be treated several weeks before planting, provided they are not reinfected by storing in old containers or storage bins.

Sprouted potatoes are injured by treatment, but will grow out new sprouts. In general, however, potatoes will not be injured by following the above directions. Many growers believe germination is improved by treatment.

**A Plain Statement of Fact**

Mogul 8-16: \$725 Cash f. o. b. Chicago



**A**T the present prices of gasoline and kerosene, no farmer can afford to use a gasoline tractor. Gasoline averages now over 100 per cent higher in price than kerosene and is likely to go higher rather than lower, in the opinions of men who know the oil business.

Again, it is neither safe nor economical to use kerosene in a tractor not specially designed to operate on kerosene. Merely changing the fuel mixer is not enough; the design of the whole motor must be changed.

Kerosene and gasoline tractors of equal power sell for about the same price and use practically the same amounts of fuel. On that basis a Mogul 8-16 tractor saves each year, in fuel bills alone, about a third of its price. The figures prove the truth of this statement.

If you are considering the purchase of a tractor this year, give these facts careful study, from every point of view, before you spend your money.

Mogul and Titan tractors are designed specially to operate on kerosene and to give their users the full benefit of this advantage. There are four sizes—Mogul 8-16 and 12-25, Titan 15-30 and 30-60. Write us for full information before you buy any tractor.

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**AT THE OPERA**

Mrs. (Thinks She is Musical): "Hasn't that soprano a marvelous technique?"

Madam (Nouveau Riche): "Well, yes—kind of—but she doesn't—er, seem to know how to manage it very gracefully. She gives it a sort of kick every time she turns around."

Keep plugging. He who fights and runs away will live only to run away again. A successful business man

has a soldier's courage, or he would not be successful. Had he run from even the most overwhelming of odds he would be numbered among the business derelicts now.—Exchange.

Let the pastures get a good start before turning your stock on them.

A little solder and a few minutes work will fix that leak in the tin pail. It beats a rag, which is unsanitary.



# THE HOME

## A LUNCHEON FROM

### LEFT-OVERS

By Elaine Short, O. A. C.

"The Queen of Hearts, she made some tarts

All on a summer's day.

Whether raspberry, gooseberry, strawberry,

History doesn't say.

We know only that they were tempting and delicious.

To the housewife who puzzles over the contents of her larder, wondering how to be economical without sacrificing daintiness, the story of the queen of hearts may bring an inspiration.

Tarts equal to those that made her majesty famous may be concocted from bits of pie crust and fruit that cannot be used in pie. The fruit may be mashed and made into jam or thickened with a spoonful of flour before filling the tarts.

Two kinds of fruit can often be used in pie. A recipe for "mock grape pie" calls for equal parts of red raspberries and apple sauce.

In batter and gelatin puddings almost any kind of fruit, fresh or canned, may be successfully used.

Cold rice and stale bread are used for rice and bread puddings. These favorite and time honored desserts may be delightfully varied by serving with different sauces.

### Caramel Sauce.

To one pint of boiling water add one cup brown sugar, 1 tablespoonful of flour dissolved in water and a little butter, salt and nutmeg.

Appetizing salads are made from fish or cold vegetables combined with lettuce and a dash of dressing.

For savory baked beans add two tablespoons each of catsup and molasses to a saucepan of boiled beans, and bake one-half hour in a slow oven.

The roast might appear again to advantages as meat pie or croquettes. Gravies containing chopped meat are delicious.

### Potato Croquettes.

To a quart of cold mashed potatoes add one egg, one-half cup milk, one-half cup flour, one-half teaspoon baking powder and a little salt. Mould into cakes and fry until they are a rich brown. The same recipe may be used for rice croquettes.

To make soup more nutritious, mash the corn, beans or similar vegetables that would otherwise have been wasted, put through a sieve and add to the liquid. Pleasing and piquant flavors may be thus obtained.

It is possible to make an appetizing variety of sandwiches from mixtures of shredded meat and chopped boiled egg, cheese and pimentos, nut meats and raisins, lettuce and salad dressing or egg and lettuce.

So the housewife who has imagination and a little inventive genius may surpass even the queen of hearts as a chef and in so doing will be elevated to the throne of her majesty, because—

"We can live without poetry,

Music and books,

But civilized man cannot

Live without food."

## HEALTH NOTES

### Typhoid Fever is Preventable.

By United States Public Health Service.

Four hundred thousand persons incapacitated and 30,000 lives lost—this is the heavy toll exacted in the United States each year by the scourge of typhoid fever. And typhoid fever is a preventable disease.

A recent bulletin of the United States Public Health Service entitled "Typhoid Fever—Its Causation and Prevention," states that within the past 10 years few of our communities having as many as 2,000 persons have remained free from this disease for any period of 12 consecutive months. In recent times the rate of its prevalence for the United States as a whole has been from two to five times as high as in some of the countries of Europe. In these European countries the typhoid rate was formerly higher than the present figures for the United States. Their great reductions in the ravages of the disease have been brought about by improvement in sanitary conditions.

In many American cities there has occurred within the last 20 years a considerable reduction of typhoid fever. Due in a large part to improved sanitary conditions in the cities, the typhoid rate for some entire States has shown a material decrease. For the country as a whole, according to available figures, the rate has been reduced about 50 per cent in the past 40 years. But the present rate is about the same as that which prevailed in some of the other advanced nations of the world 30 years ago. In other words, the United States is a generation behind the times in respect to the reduction of its typhoid rate.

Practical and efficient measure for the prevention of typhoid fever are definitely known, but the efforts to get the people of the average self-governing community to carry out these measures to a reasonable extent are oftentimes decidedly experimental in character. In many instances the cost of modern sanitary improvements has been an obstacle in the way of typhoid prevention. It is often difficult to convince the governing authorities that money expended in the protection of the public health yields large dividends.

In rural communities and small municipalities another factor—the instruction and co-operation of the individual property owner—enters into the problem. Cooperation of the individual property owner—enters into the problem. Here every home must have its own method of sewage disposal, and in most cases its own water supply. The Public Health Service bulletin above referred to deals in a comprehensive way with the construction of wells and outhouses.

In recent years a specific method for increasing individual resistance to typhoid germs has been employed. This is known as antityphoid inoculation or "vaccination." This method has been used extensively in military organizations of the United States, and from the results obtained it appears that inoculated persons are, upon equal exposure to typhoid infec-

tion, less than one-fourth as likely to develop the disease as those who have not been inoculated and who have previously had the disease. The average duration of protection given by inoculation has not been determined, but is supposed to be about two years.

It is pointed out, however, that the protection given by antityphoid inoculation is relative, not absolute, and that such inoculation is not to be regarded as a substitute for sanitation.

### "SWAT THE FLY" EARLY.

L. Haseman, Missouri.

But why "swat the fly" in the winter when you fail to see any? Listen!

"I am a big fat mother fly and I live in a large house, tucked away in a crack behind a door casing. The housekeeper has overlooked me. She thinks we are all dead. I have a friend or two in the basement and a cousin in the attic. We have seen each other a few times since winter set in, though we hide away most of the time. Several of my friends and near relatives selected the barn for their winter quarters and I hope they are comfortable. Some live outdoors in sheltered places and some in other houses. A few of my younger brothers and sisters were still feeding in a filthy stable on the other side of the road last fall when I developed wings and flew away with filth sticking to me. This filth I have since wiped off on cake, bread, and other exposed foods in the pantry. Some of these brothers and sisters will no doubt escape the cold, as stable manure stays warm if it is permitted to accumulate in the stable all winter. These are now enclosed in small, hard brown cases and as soon as warm weather comes I shall go to the stable and see if I can find any of them.

"My city cousin says:

"We have had a few warm days but it is still too cool to venture out. In a few days I expect to move. I am hungry and need more air. I long for the day when I can leave the house for a warm sun-bath. Then I will find some filth on which to lay a few eggs. There was plenty of filth around last fall and of course none of it has been removed during the winter. My first crop of eggs will be laid about the middle of March if all goes well. By the middle of April I will have grand children in abundance. By June my offspring will have scattered all over town and by August we will be in full possession of the place, holding council in the City Hall, placing sick and wounded in the hospitals by the dozens, and handling the city government about as we please. This city does not fear us and is not prepared so by the time it gets ready for us we will be in full control. I hope we may have a successful year and all looks successful so far.

Is winter work worth while? What can be done? First kill that boastful fly behind the door casing; then go to the attic and basement, to the garage and stable and let not one fly escape. Clean all stables and remove all filth in which the eggs and maggots may harbor, and scatter it in the fields. Be sure that all neighbors do likewise and if necessary induce the City Council to require that all premises are properly cleaned up during the winter. Then you will have at

least a fighting chance with this filthy scourge of the human race. Preparedness means success in such a campaign.

## EVERY JUNK PILE

Tells a story—and it is often tragic.

Millions of Dollars worth of farm machinery finds its way into the melting pot, because it was never introduced to good oil and grease.

You are not satisfied with the results you are getting from the castor machine or harvester oil you are now using.

You should KNOW and USE



## Oil and Grease

We guarantee them to last five times as long as any oil or axle grease on the market.

Write for liberal Free sample—Post-paid.

## Guarantee Tire & Rubber Company

427-429 South, Main Street  
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## CALKO DIP

(STANDARDIZED)

AN

## INSECTICIDE & DISINFECTANT FOR

## CATTLE SHEEP HOGS POULTRY AND

To be used for disinfecting barns, chicken coops, corrals, hog pens, outhouses and etc.

### One Gallon Calko Dip Makes

From 50 to 100 gallons disinfectant.  
45c qt.—75c half gal.—\$1.25 gal.  
Delivered

## Calko Hog Powders

IS A

## HOG CONDITIONER AND WORM EXPELLER

Don't feed Worms.  
Save your Hogs.

—25 lb. sack (delivered parcel post) \$2.00  
—50 lb. sack (delivered freight) \$3.50

### CALLISTER-KORTH CO.

McIntyre Bldg., Salt Lake City, Ut

Mention Utah Farmer when you write.



## FARM CREDITS.

I. D. O'Donnell.

Riding on the wave of every popular demand are numerous "fakers" who profess, and very plausibly, to be able to give the people just what they want and do it immediately. Scattered all over the country are co-operative creameries which are monuments to the gullibility of neighborhoods talked into starting these creameries when the starting of creameries was being agitated from one end of the country to the other. The sad feature of it is that many of these creameries have never turned out a pound of butter for various reasons, among them being the fact that the farmers were not in a co-operative frame of mind; also in many cases there were not enough real dairy cows in a neighborhood to supply the local demand for dairy products. The people just wanted a creamery, and they got it, and they have it, and they don't know what to do with it.

The same is true of starch factories, flying-machine factories, and various ideas which for a time were inflated and floated over the country with profit to promoters and schemers and to no one else.

And now comes the rural-credits wave and with it men, well meaning and otherwise, who want to do something for the people in the way of rural credits before the cumbersome machinery of State and National rural-credits plans can be put into operation. They seem to think that inasmuch as the American farmer has been waiting a century or two for rural-credit legislation he is not able to wait any longer, not even a few months, and they are going to put into operation at once concerns which will loan millions of dollars to the needed farmers at 6 per cent per annum—if the farmers will furnish the money and pay 25 per cent, or thereabouts, for the promotion of the scheme.

I would not attempt to discourage the organization of any company that intends to secure and loan funds to farmers at any reasonable rates of interest. Such companies deserve support. I merely take this opportunity to intimate to our people that now while there is a strong general demand for rural-credits organizations is a good time for the old "gold brick" salesman to do business. I do this for the reason that the American people are prone to forget expensive experiences they have had. They "bite" on one proposition today and "nibble" on another proposition tomorrow and they are looking for something new for next week. Don't tie up to any proposition in the rural credits line that was hatched up to sell and not to work. Don't do anything to make the people in your community lose faith in the rural credits movement. Good and substantial systems for land loans are sure to come.

A safe estimate of the life of a machine left continuously exposed is from 30 to 50 per cent less than that of a machine properly cared for.

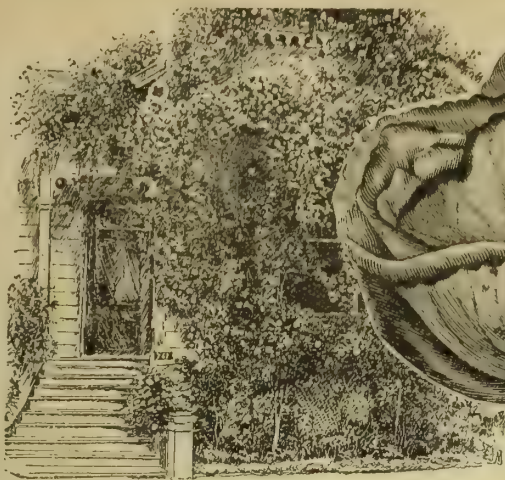
## FOR SALE

Three pure bred registered Percheron mares. Must sell at once. One now in foal. Price for the three \$1,000.00. Write or call on

E. D. HATCH

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Utah



## THIS AMERICAN QUEEN

COLLECTION OF THE  
MOST BEAUTIFUL  
ROSES  
FREE

To All Readers of  
Utah  
Farmer

WE BELIEVE in beautifying our homes and surroundings so that they will be a pleasant place to live. Nothing adds more to the beautifying of the Farm Home than fragrant flowers and the Rose is Queen of Flowers. Here's a Wonderful Bargain Offer we have been able to obtain for our friends—and that's you.

## Hardy Ever-Blooming Roses

### The Kind That Grow and Bloom

To each reader of the Utah Farmer, we want to deliver this collection of eight hardy ever-blooming rose bushes. Every lover of beautiful flowers should send us their order at once as these roses are the kind that bloom every month of the growing season, producing great masses of large double flowers from early spring until late fall. They possess all the good qualities of vigorous growth, delicious fragrance, beautiful color and fascinating form.

We enclose with each collection special printed instructions on the planting and care of roses and guarantee them to reach you in healthy growing condition. We will deliver them at the proper time to plant in your garden.

This choice collection of Roses consist of such beautiful varieties as Etoile De France, My Maryland, Bessie Brown, Etoile De Lyon, Helen Gould Gruss Teplitz, Ulrich Brunner, La France, Kaiserin Augusta Victoria. A choice variety of colors and some of the finest roses grown.

## Our Splendid Offer

Send us \$1.00 for a years subscription to the Utah Farmer and we will deliver the entire collection of eight Hardy Ever-Blooming Roses to your post office address positively free. Don't delay but send your order today. These roses are what is known as dormant and can be planted at any time during the next 3 or 4 weeks.

Any old subscriber can take advantage of this offer by paying one year in advance. If you are paid in advance and want this beautiful collection of roses send us one dollar and we will send roses and have time of your subscription extended accordingly.

Send today for this beautiful collection of ever-blooming roses to the UTAH FARMER, Lehi, Utah.





# Boston Garter

Wrist Grip

YOU enjoy more comfort and do better work if your socks are held snugly by **Boston Garters**. They're put on or taken off in a jiffy and hold securely all day.



LISLE  
25 Cents  
SILK  
50 Cents

SOLD EVERYWHERE  
GEORGE FROST CO.  
MAKERS, BOSTON



## For silo owners

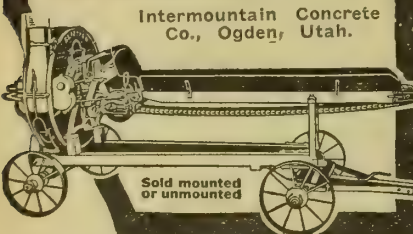
### Start now to choose your silo filler

Losses were very heavy last fall among farmers who depended upon some body else's cutter, and couldn't get it when needed the worst. Others lost big because their cutters broke down at the critical time. The

### BLIZZARD Ensilage Cutter

is the dependable machine for the farmer—because so simple, safe and easy running. Small engines plenty powerful enough. Unlimited cutting and elevating capacity. Fills the world's largest silos as easily as twenty-footers. Self-feed table saves one man. Repair cost very little. Many still giving good service after ten and fifteen years of use. Talk with us about an ensilage cutter now Drop in for a catalog, at least.

Intermountain Concrete Co., Ogden, Utah.



Sold mounted or unmounted



### YOUR HARNESS OR YOUR LIFE!

Make your harness safe by using

### EUREKA HARNESS OIL

It strengthens and livens the leather. It is harness insurance. It adds new life to old harness. It keeps new harness new.

Dealers everywhere

THE CONTINENTAL OIL CO.  
(A Colorado Corporation)



### TREES CONTROL WATER SUPPLY WESTERN VALLEYS

(Continued from page 3—conserved and guaranteed forever, the following observations are respectfully submitted to the judgment of an intelligent public opinion.

#### Effects of Mountain Groves.

The need of reforestation and of more careful limitation of grazing was strikingly brought out by the case of the stream which flows down Nine Mile Creek into Mayfield, San Pete County, Utah. A few summers ago I had occasion to visit this canyon, and a storm was in progress as we went up. For many miles the stream was filled with soil washed down from the mountain sides. This occurred in the lower parts of the canyon, where unlimited grazing had been the rule. The hillsides were relatively bare of shrubs and grasses, and the rain rushed down immediately, carrying a good deal of the soil with it. The sides of the stream in a number of places were lined with oak brush and shrubs, together with trees. Wherever this was the case the boulders and debris, with a good deal of the soil and gravel, would be caught by the trees and prevented from rushing into the stream. It was remarkable to note the effect of these small shrubs in holding back boulders of considerable size and in entangling a great deal of the debris that otherwise would have been swept into the current.

#### Where Streams Are Clear.

At a certain distance up the stream a remarkable change was noted. Above a certain point the stream was no longer filled with mud and gravel but was relatively unladen with debris and other mud, although it had been raining there just as it had rained lower down the canyon. The difference was so noticeable that I made inquiry of the people there as to the cause.

Why this change in the amount of soil and mud in the water above a certain point in the canyon? I was informed that above this point the forest reserve began, and unlimited grazing was not permitted there. As a consequence the grasses and underbrush which had formerly been largely grazed off had renewed their growth, in a few years and the further loss of soil from these mountain sides was inconsiderable. Wherever the forest reserve extended, the mountains were fairly well covered with vegetation, including shrubs and some trees. Where the reservation was not in operation, the trees were mostly gone and the shrubs had disappeared. From the forest areas the streams came down clear and not greatly swollen during the raging storms. Where forest supervision did not exist, the streams would fill to overflowing with the mud, stones and debris of the hillsides, which were rapidly being washed bare.

#### The Carpet of Shrubs.

It is submitted that what goes on in the Mayfield stream is duplicated in most of the valleys of the Rocky Mountain region. Other places may not be so bad as this locality. In Mayfield the people were so confident that the stream's banks were so high that no conceivable flood could reach their top. The summer after I was there this supposition was shown to be an illusion, for the flood came above the banks and destroyed a great deal of property in that region. In fact, there is no such thing as se-

curity from mountain floods unless the mountains are well wooded or covered with the smaller vegetation that can hold back the downpour of rain that is likely at any time to fall there. It is the wooded areas and the vegetative cover that in all cases hold back the flood; and it is these covers of the mountains that regulate the flood of the streams. Without such vegetative covers the water of the mountains will all come down in spring and early summer, leaving the later summer and fall without mountain water.

Since this condition is rapidly becoming worse in a great many places, and is only arrested in places where forest regulation prevails, it is the belief of the writer that active steps should be taken by the people of all the western valleys to see that the forest cover is not removed from the regions that supply summer and fall water. Wherever it is necessary or desirable to remove the timber, this should be done only under intelligent supervision, and provision should be made for reforestation of the areas from which the timber is taken.

#### Water for All Time.

Many of the upper divides now bare will support a growth of some kind of timber if trees are planted on them. It would be the course of wisdom to proceed with this planting as rapidly as possible. If this replanting of trees and the conservation of the chief groves now existing are not soon carried out, it is the prediction of certain engineers who have made a study of the situation, that the water supply of many of the valleys of the Rocky Mountains will be in whole or in part cut off during the months when it is most needed.

The beginning of the diminishing return of water has already commenced in numerous localities. Fifty years will see it culminate at the present pace of destruction from which time the population and power of the Rocky Mountain region will go rapidly downward. My own hope is, that there may be some error in such predictions, but the calamity of a diminishing water supply is certainly impending.

### ECONOMICAL USE OF IRRIGATION WATER

Under conditions such as prevail in Idaho on a normal project with medium clay loam, irrigated land should be supplied with sufficient water during the season, to enable each irrigated acre to retain 2 feet, according to a recent investigation of the U. S. Department of Agriculture. This applies, it is said, to at least 7 per cent of the irrigation projects in Idaho and probably to as large a per cent of the projects in other States. In order that the land may retain the needed 2 feet of water per acre, the former should receive about 2 1/4 feet on medium clay and sandy loam soils. Where the soil is porous or has a porous subsoil lying closer to the surface than 6 feet, more than this quantity of water should be delivered to the consumer, the exact quantity depending, of course, upon the porosity of the soil. Where an Idaho project is devoted one-half to grain and the other half to alfalfa or other crops, the total volume of water should be distributed something as follows: 18.7 per cent during May, 28 per cent during June, 32.8 per cent during July, 17.2 per cent during August, and 2 per cent during the first half of September.



For Greatest Satisfaction Use  
**DOUBLE SERVICE**  
**Automobile Tires**  
Guaranteed 7,000 Miles Service  
**Absolutely Punctureproof**

Double Service Tires are made double the thickness of the best standard make tires. This 100% greater wearing surface naturally gives that much more mileage and service. The average of 12 miles of tough makes these tires absolutely punctureproof. These tires excel all others for use in the country over rough and rugged roads as well as on hard pavements. They are as easy riding and resilient as any other pneumatic tire—the air space and pressure being the same. They are the most economical and "care-free" tires made and are used where tires must be depended on and tire troubles cannot be tolerated. Many Double Service style tires are in use in the U. S. government and European War service. Our output is limited to a certain amount, but for a short time we offer the following reduced special prices as an introductory offer:

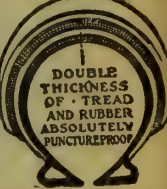
#### PRICES

Tires	Tubes	Tires	Tubes
30x3 in. \$ 8.50	\$2.50	36x4 in. \$17.45	\$4.65
30x3 1/2 in. 10.85	3.10	36x4 1/2 in. 21.20	5.60
32x3 1/2 in. 12.75	3.50	36x4 3/4 in. 22.50	5.75
33x4 in. 15.75	4.20	37x4 1/2 in. 23.50	6.20
34x4 in. 18.70	4.85	37x5 in. 26.50	6.60

All other sizes not included in above list also furnished. Non-skids at 10% additional. Terms: Payment with order at above special prices, a 10% discount allowed on orders for two or more tires. All personal checks must be certified.

Try these tires now and be convinced of their very high qualities. Sold direct to the consumer only. Descriptive folder upon request. Write for it.

Double Service Tire & Rubber Co., Akron, O. Dept.



## Why Expect a Ton of Power from an Ounce of Gasoline

The power to drive the threshing machine is a most important factor in getting good results.

It must be steady, strong and sure.

For work at the belt the explosive engine does not yet successfully compete with steam without handicap in the shape of weight and bulk that is cumbersome.

## The Nichols & Shepard Co. Recommend the Steam Tractor

For driving their Red River Special separator, and they build it in all sizes from 13 to 100 horse-power.

No better or more highly developed engine is made for all around farm purposes in regions where the use of steam can be practised with economy.

## With Good Water and Good Fuel Use Steam

There is a lot of matter about the reliable work that is being done with the steam tractor of N. & S. Co. make to be found in the Home Edition of the Red River Special paper. One of your own neighbors may have written some mighty good reasons as to why he prefers to own one. Write for a copy and argue it out with him if you don't believe what he says. Ask for a Big Catalog when requesting your paper.

## NICHOLS & SHEPARD CO.

(In Continuous Business Since 1848)

### BUILDERS EXCLUSIVELY OF THRESHING MACHINERY

Red River Special Threshers, Feeders, Wind Stackers  
Steam and Oil-Gas Traction Engines

(7) BATTLE CREEK, - MICHIGAN

ber. After this time the only demand for water is for live stock and dom-



## RELIABLE FARM BARGAINS

We have one of the greatest bargains to offer in a farm that has ever come through our office. A man living in Illinois and owning one of the best farms in the Bear River Valley has instructed us to sell it at a very low rate. This property is one of the best sugar beet farms and will rent for \$16 per acre per year, which would be interest on \$250 per acre. We are authorized to sell this place at \$135 per acre on ten years time at 6 per cent interest. Beautiful home, barns, trees fine water for domestic purposes, first class water right from the Bear River Canal for irrigation, and on the County Road. A farm that will pay for itself in a very short time.

Bargain No. 2 contains 460 acres of land without water. One mile from the railroad station right in the heart of the Bear River Valley; for the ridiculously low price of \$25 per acre. Ground is all fenced and tile drained.

160 acres at Inkom, Idaho, on the main line of the O. S. L. First class cattle ranch and farm combined. Independent water right; free and open range immediately adjoining the place. A bargain at \$65 per acre on time.

We have one 80 acre farm, one 97 acre farm, one 160 acre farm, one 150 acre farm; all improved, with water right, good homes and out-buildings; for sale in Cache Valley. Prices ranging from \$55 to \$75 per acre on very easy terms.

2 acres on 16th South and 9th East. First class garden land. Water piped to the place, electric lights, and other modern conveniences. \$500 per acre on very easy terms.

40 acres all planted to alfalfa. One-half mile from the railroad station, one mile from Bear River City. \$115 per acre; \$300 down and ten years on the balance at 6 per cent interest.

We exchange farms for City homes.

Phone—Wasatch 963.

KIMBALL and RICHARDS  
"Land Merchants"

56-58 Main St.,  
Salt Lake City, Utah.

## Utah-Idaho Sugar Is Concentrated Nutriment

With all the proofs from food experts and evidence by practical tests, showing that sugar is one of our chief foods, mothers should use more Utah-Idaho Sugar in their home cooking.

Sometimes sugar is the only food given soldiers for days at a time. It relieves fatigue and is one of the best fuels for the body.

It is a cheap, pure, easily digested food. It should be used liberally in every home. Order it by the sack. It's more economical to buy in this way.

**UTAH-IDAHO SUGAR**  
ABSOLUTELY PURE

estic purposes.

During the course of this investigation the water was measured upon 529 individual tracts covering a total area of slightly over 3,600 acres. The land was used for staple crops, alfalfa, clover pasture, spring and winter grains, potatoes and orchards.

Experiments show that the yield of grain on the heavier soils such as clay loam, sandy loam, and fine sand, will normally increase with the supply of water until an amount varying between 1.4 and 1.8 acre feet has been applied. After this the application of more water will decrease the yield of grain and in many cases the yield of straw as well. Alfalfa requires larger quantities of water and the experiments did not reach a point at which an increased supply began to lessen the yield. If the yield alone is considered it is difficult, it is said, to apply too much water to alfalfa, provided no more is applied at one time than the soil will promptly absorb. With both grain and alfalfa however, the amount of water that it is profitable, from a business point of view, to use depends upon the relative cost of land and of water and other local economic conditions.

With potatoes, it is found that there is a strong tendency for the yield to increase with the supply of water. The rate of increase, however, grew smaller as the quantity of water was increased, and on clay loam soils it probably will not be advisable to apply more than 2 or 2½ feet per acre to the crop.

The report also deals with the question of the proper quantity of water to apply at each irrigation. An unavoidable loss from evaporation invariably occurs during and immediately after irrigation and it is, therefore, desirable to have no more applications during the season than are required to maintain the needed moisture content in the soil. Investigators found that from 3 to 6 acre-inches at one application is the correct quantity. Impervious soils should be so manipulated that they will absorb the smaller amount at least, while on the porous soils large irrigation heads should be used. On these porous soils very little can be accomplished with small heads of water because the water is absorbed so rapidly that it can not be forced over the field. The average size of the irrigation head over the greater part of Idaho seldom exceed 1 to 2 second-feet. On the porous soils, the use of heads three or four times this size it is said, will give a much higher efficiency.

In conclusion, the report points out that the determination of the proper supply of water for an irrigation project is a very serious problem. If too little water is allotted, the yields will be small and the lands never will reach their highest possible value. On the other hand, if too much is allotted, the excess supply is almost invariably used and the irrigated lands may deteriorate rapidly through water-logging. Moreover, the water is diverted from use elsewhere and the ultimate area of irrigated land thus reduced. In determining the amount of water to be used, other factors than the maximum yield must also be taken into consideration. The cost of the land, the cost of the water, and the value of the crops produced are all important considerations. There are but few cases in which the increase in yield is proportionate to the quantity of water used.

## BIG INCOMES FOR WELL DRILLERS \$2500.00 to \$10,000.00 Per Year Clear

If you want to get into a big paying business of your own and be your own boss, investigate the exceptional opportunity now offered in the Well Drilling Business. Ten times more work to be done than drillers do it! \$50.00 a day clear profit is what many men are doing with

I clear \$50.00 a day above expenses right along. Thos. Kelly



From Feb. to Dec., 1915, I made \$10,500.00 with One of Your No. 16 Machines. Wm. Gardner

## Armstrong Well Drilling Machinery

We've been building high-grade drilling machinery for nearly half a century. We've learned how to combine simplicity and durability. And we offer equipment that will drill faster and at a lower cost per foot than any other machinery in existence—machinery that is easiest to operate—that runs quietly—eliminates repair bills—that is always on the job. Our patented Internal Compensating Band Wheel Clutch—a feature that saves all lost motion—is one of the greatest improvements ever found on a drilling machine. Besides saving energy and power, it gives absolute control

over drilling motion. This and our Friction Hoist, another great trouble and work saver, make operation an easy right-hand control of entire machine, including raising and lowering the derrick by power. Many other equally striking advantages.

Pay for an Armstrong Drill as it pays for itself on our part cash and time payment plan.

**Write Today** for our big free catalog. Tells all about Armstrong Drilling Machinery and the Well Drilling Business.

ARMSTRONG MFG. CO.

508 Chestnut Street, Waterloo, Iowa

## This is the Mower that's Easy on the Team

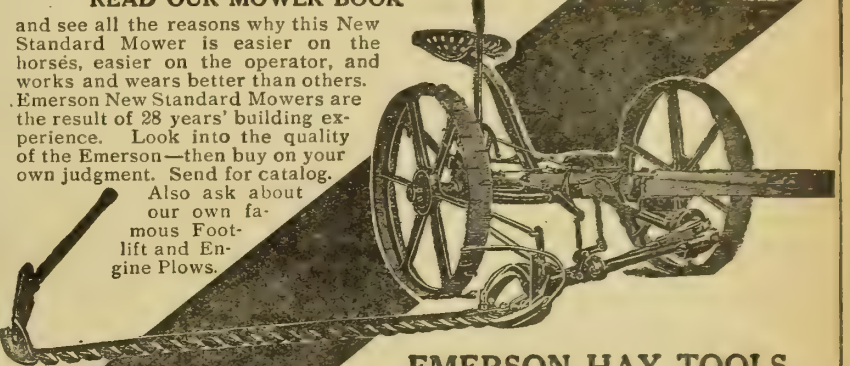
Even with a seven or eight-foot cutter-bar, it is as easy work for your horses as plowing corn. It is the only mower that carries the entire weight of machine, cutter-bar and driver, on the drive wheels. We've taken the weight off the horses' necks—taken the weight off the outside as well as the inside shoe—there's no sledding or dragging. The pull is all on the wheels, and it's a straight pull forward.

### READ OUR MOWER BOOK

and see all the reasons why this New Standard Mower is easier on the horses, easier on the operator, and works and wears better than others. Emerson New Standard Mowers are the result of 28 years' building experience. Look into the quality of the Emerson—then buy on your own judgment. Send for catalog.

Also ask about our own famous Foot-lift and Engine Plows.

## EMERSON STANDARD



### EMERSON HAY TOOLS

Hay-field efficiency and haying profit are greatly increased by the use of EMERSON Sweep Rakes and Hay Stackers. They are built to last, wonderfully simple and strong, of proved durability.

EMERSON Sweep Rakes have hinged tongues—the ones that never gall a horse—and many other superior features.

EMERSON Hay Stackers have light draft—are easy on horses—easy to operate—well made throughout.

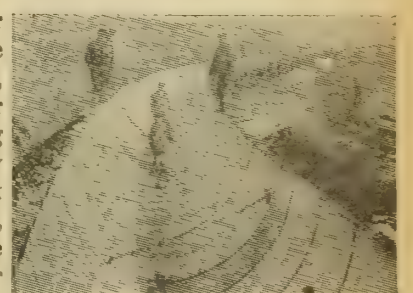
Speed up your hay-field work—make it better all around for yourself and teams—by using the great EMERSON line. Free Booklet on request.

## Miller-Cahoon Company

Murray, Utah

Idaho Falls, Idaho

If you are losing 60% of your water through SEEPAGE, which is the average loss in irrigation ditches, use our LENNON Smooth Flume for Ditch Lining. Instead of building dikes to carry water across your low places, use Flume. It will not leak and will pay for itself the first year, by the water it will save you. Made in all sizes. We sell everything for irrigation.



**UTAH CORRUGATED CULVERT & FLUME CO.**  
Woods Cross, Utah.



# A PERMANENT HIGHWAY FOR UTAH COUNTY

(Continued from page 3)

sensible and just. The one practical way to put this idea into effect would be for the county to create what is commonly known as twenty-year highway bonds, of sufficient value to cover the entire cost of the improvement. In that case we would have the following figures:

50 miles of Permanent Highway @ \$13,000 per mile.....	\$650,000
A bond issue for this amount would thus be required.	
Interest on \$650,000 @ 5 percent per annum .....	32,500.00
Maintenance, 50 miles, @ \$30.00 per mile .....	1,500.00
Sinking fund—the amount to accumulate each year in order to retire bonds in 20 years earning 4 percent compound interest .....	21,814.00
Total amount to raise each year for 20 years.....	\$55,814.00

Considering that the assessed valuation of the county is, or rather will be at least \$42,000,000 the amount \$55,814 will represent a tax of 1 and 3-10 mills, meaning that an acre of ground assessed at \$150, would be charged 19½ cents on account of the 50 miles of improvement. Now then Mr. Tax Payer, you have the cost of the road in actual dollars and cents. Is it worth it? Let us see:

In the first place, local road authorities advise, that according to the old basis of assessment, it cost the people of this county about one mill for maintaining the present highway, and down in the southern part of the county, there is a special levy of one and one half mills for sprinkling purposes. Think of it—A one and one half mill tax just for sprinkling. Accordingly, a permanent hard surfaced highway would cost those people less money than they now pay for simply sprinkling their present road. On a whole, Mr. Tax Payer, you see that the cost of maintaining the old unimproved highway, which you now have, will almost pay for the maintenance, the sinking fund and the interest on the bonds, of the permanent hard surfaced highway—a highway which needs absolutely no sprinkling, and so little maintenance—\$30 per mile per year—that this item may be safely neglected.

Next, let us analyze the costs of hauling on both the hard surfaced permanent highway and on your present unimproved road. In connection therewith, the U. S. Government asserts, that to haul a load of one ton over a distance of one mile on the hard surfaced highway costs from five to ten cents, and from twenty to forty cents on the unimproved road. For example, Smith down here at Mapleton, owns ten acres of land which he sows with hay. This land is worth \$150 per acre, and yields a marketable output of five tons per acre, which he transports to the Provo market, a distance of seven miles along the highway under consideration.

On the hard surfaced highway, using the Government's average figures of seven and one half cents per ton mile, we have:

10 acres, 5 tons per acre, 7 miles @ 7½ cents.....	\$26.25
Cost of improved road charged to the above 10 acres (10 acres x \$1.50 x 1 3-10 mills).....	1.95
Cost to market tonnage on hard surfaced highway.....	28.20
Now then, to market the same tonnage on the present unimproved highway, using the Government's average figure of thirty cents per ton mile, and assuming that the road does not cost a penny, we have:	
10 acres, 5 tons per acre, 7 miles @ 30 cents.....	105.00
Cost of road charged to the above acres .....	NOTHING

Cost to market tonnage on present highway ..... \$105.00

We thus have a difference of \$76.90 in favor of the hard surfaced highway, which costs this particular taxpayer the paltry sum of \$1.95 for his ten acres. This \$76.90 in this man's net gain. The interested tax-payer may now figure for himself costs for hauling any tonnage any number of miles—the amount of saving of course, increasing with the tonnage of the number of miles over which it is to be hauled.

How then Mr. tax-payer, you see that an improvement of the character described, is not a drain upon one's resources, as some people who have not investigated the proposition for themselves are want to believe, but represents a far sighted investment of the first order. Again Mr. tax-payer, this improvement will cost money—every thing of value does—it will cost \$13,000 per mile, and 50 miles will cost \$650,000; but you who own 40 acres of ground worth \$6000, must not look too closely at the \$650,000—rather look at the amount you your self will be required to pay—1 3-10 mills x \$6,000 or \$7.80.

Why man—by having a smooth hard surfaced pavement to drive upon you will save at least that much money in tires alone, for both your wagons and your automobiles.

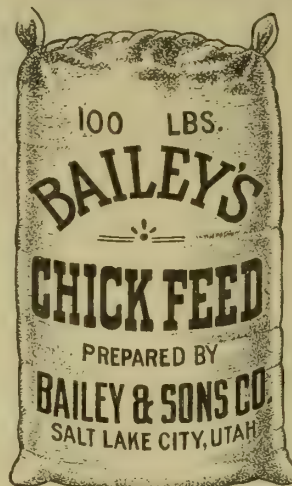
It is not the purpose of this article to picture or describe some of the advantages to be gained that cannot be measured in hard earned dollars and cents, such as the influence of hard surfaced highway, connecting your southernmost points with Salt Lake City, would have in increasing property values in all parts of the county; in attracting to your county thousands of tourists, who would otherwise pass us up for places having more attractive roads and highways. Then again, the elimination of mud and dust, and the ability of one to use the highway for three hundred and sixty five days of the year, are advantages which no citizen can afford to overlook, and which necessarily have a high monetary value to every tax-payer. Another important item, is the fact, that after this permanent highway, which requires so little maintenance, has once been constructed, a goodly part of the money, which was necessarily used for keeping the old stretch of 50 miles in passable condition, could then be spent on the feeders to highway, and on the other roads of lesser importance throughout the county, which, heretofore, have been sadly neglected on account of the lack of the necessary funds.

In calculating the cost of the permanent hard surfaced highway, we used an amount of \$13,000 per mile for first cost—this for a road sixteen feet

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SALT LAKE CITY, UTAH

wide—and \$30 per mile per year for maintenance. As a matter of fact, there is but one type of permanent highway which has been built for this low figure, and which has been maintained for the almost negligible amount of \$30 per mile per year, and that is the Concrete Highway. It represents the only type of permanent pavement within reach of all the people. Other types will range in price from \$13,000 to \$17,000 per mile for first cost, with considerably higher amounts for upkeep. The concrete highway is the type which the Utah State Road Commission has been constructing in this state for the last three years, it represents the type being built by the people of Salt Lake County, Davis County, the cities of Provo, Park City, Logan, etc., and why? Simply because this type of pavement is the most economical from all view points.

The fact that there are over 51,000,000 square yards of this type of pavement in the United States, some of which is in its twenty-fourth year of service, and upon which there has been a maintenance cost of less than \$30 per mile per year, is ample proof that this type of pavement is the crowning achievement of the road Building Science.

Over twenty years of service with the concrete pavement has proven it durable, sanitary, dustless, non-slippery, suitable for both horse drawn and motor driven vehicles; lowest in cost of maintenance, and in good condition for three hundred and sixty five days of the year.

This type of pavement is not patented, is simple of construction, and can be built from materials found in almost every state in the Union,



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Made by the  
OGDEN-UTAH KNITTING CO.  
Ogden, Utah.

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particularly Utah. Therefore, it is a Home Product, and may justly be called The Tax-payer's Road. Briefly stated, the construction of a concrete road consists of placing upon a previously prepared and thoroughly compacted sub base, a wet mixture of Portland Cement, sand, and stone. This mixture hardens into as much solid rock, which is time and weather proof and grows stronger as it ages.

"I may not be a king," said the derby hat, "but I at least wear a crown."  
And then the band played.

"Why do you want to get a divorce?"  
"Because I am married."



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Refiners  
Salt Lake



"EVERY  
DROP  
COUNTS"

## Questions and Answers

Utah Farmer:

Dear Sir:—Will you kindly advise the best grass crop to grow on dry farms, at an elevation of 4900 feet, rainfall 14 inches. We have considered Sudan Grass, Millet, Feterits, Kafir Corn, and also tell us if we can grow this with variety to cut it early for hay. Which in your judgment would make the best feed for cows; for horses?

I. M.

Answered by Dr. F. S. Harris.

No grass has been found entirely satisfactory for dry-farming in all sections. In many places alfalfa is the most satisfactory forage, while in other places it cannot be made to grow. Sudan grass give considerable promise in many sections, but it is somewhat new and its real value has not yet been determined. Bromus inermis is liked by many dry-farmers, but it has been a failure on many dry-farms. It will be seen, therefore, that no single forage is successful on all dry-farms; experience must help in deciding which to use in your section.

Utah Farmer:

Dear Sir:—Will you please let me know the correct amount of alfalfa seed to sow to the acre; the best way to sow it; and how do you recommend planting it on dry land? What success has been attained? Any information along this line will certainly be appreciated.

Sincerely, L. D.

Answered by Dr. F. S. Harris.

Alfalfa is planted at rates varying from 6 to 24 pounds of seed to the acre depending on conditions. On dry-farm land about 6 pounds are recommended, while in humid areas where it is difficult to get a good stand as high as 24 pounds are used. For the average irrigated farm about 15 pounds to the acre are planted.

Alfalfa may be sown either in the spring or fall; but spring planting is usually most successful unless the fall planting is done early enough to secure a good stand before cold weather sets in. Seeding with a drill in well prepared seed bed gives best results. No forage crop is better than alfalfa where it can be made to thrive.

Reed, Utah.

Utah Farmer:

I have been told that Sudan grass contained poison after it was frozen in the fall and was not good for stock. If it has been tested in anyway and this condition is found to exist, I wish for the benefit of myself and other readers you would print an answer in your next number.

Respectively,

W. M. Bond.

Answered by Dr. F. S. Harris.

Sudan Grass belongs to the sorghum family, and some of the members of this family develop a poison under certain conditions particularly when frozen. I have not, however, known of any cases where Sudan Grass developed this poison.

Glenwood, Utah.

Utah Farmer:

Dear Editor:—I have a mare with a badly gaulded shoulder, kindly let me know through the columns of your

paper the best remedy for healing a sore of this kind, and also something that will take the swelling out.

Sincerely,

Josiah Tuttle.

Answered by H. J. Frederick.

**Shoulder Bruise:**—Shoulder bruises very often occur on animals that are "green" at their work, or such that have not been worked for a long time. Again, it very often is a result of an improperly fitting collar or allowing one tug to be longer than the other—irregular draft. In order to harden the shoulders when an animal is first put to work it is well not to leave the collar on too long, and upon removing the same the shoulders should be washed with cold water. In order to harden the skin more, alcohol is sometimes used to rub over the shoulder bed. Where the shoulders become chaffed, a good drying powder, consisting of boric and tannic acid in equal parts with about one-half part of iodoform, should be powdered over the chaffed region just before applying the collar. See to it that the collar is absolutely clean and fits properly. Wherever a bruise occurs a swelling ensues. This swelling usually contains a straw color serum and unless this disappears in a short time it should be opened to allow free exit of this material. Otherwise, it will organize and form a regular fibrous lump. This will have to be removed and dissected away if the trouble is ever overcome. These lumps are commonly known as "sit-fasts" and require extirpation and this necessitates laying the animal off for three or four weeks. Where a wound exists on the outside of the shoulder it might be well to use a good disinfectant such as a three or four per cent solution of carbolic acid or creolin. This is sometimes painted with tincture of iodine until healing takes place. Perfect cleanliness should be observed in order for this to be successful.

Almo, Idaho.

Utah Farmer:

Gentlemen:—Would you kindly answer me the following questions through the columns of your paper?

1. What is the relative difference in the feed value of grain (wheat or barley) ground and cooked or ground and fed dry or soaked?

Is there enough difference in the feed value to pay for cooking providing fuel is plentiful and close at hand?

2. Is cooked grain (wheat or barley) good for horses or is it better to chop and feed dry?

3. Is there a safe and sure remedy to stop the growth of horns on young calves without using a saw? If so would you kindly tell me what it is and how to use it?

Trusting you can answer these questions for me in your next number.

Yours for success,

George M. Edwards.

Answered by Dr. W. E. Carroll.

1. The relative values of wheat and barley will depend somewhat upon the class of animals to which it is fed. Young growing animals do somewhat better on wheat than barley, especially if the grain makes up a large part of their ration. If these

small grains are fed to hogs dairy cows, and possibly horses, from six to fifteen per cent will be saved by chopping, grinding, or rolling. If, however, the grain is kept soaked for 12 hours or more until it is somewhat soft this will be found about as good as grinding.

2. Experiments have shown that cooking grains actually decrease the food value for practically all classes of animals.

3. A caustic stick which can be obtained at most any drug store with directions for using can be used with success for stopping the growth of horns on calves. This is very severe and should not be allowed to spread on the head of the calf as it burns the skin wherever it comes in contact with it, this is not infallible but has been used by some with considerable success.

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Any size roll developed  
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# POULTRY

## HINTS ON POULTRY RAISING

### Housing.

Keep the house clean and dry. Damp houses usually mean poor ventilation and unsanitary surroundings. Clean up the house thoroughly and disinfect by spraying with white wash made in the usual way and add ½ pint of cresol, zenoleum, or some other strong disinfectant to each gallon. Mites live and breed in the cracks, corners, and filth in and around the building. Now is the time to get them under control before they have done any injury. Spray or paint the perches, nests, dropping boards, etc., with kerosene to which has been added ½ to 1 pint of some good coal tar disinfectant. Use freely now and prevent injury to the fowls later on. To keep the building dry and cool, and to supply the fowls with the oxygen necessary to keep them in good health and producing condition, an abundant supply of fresh air is necessary day and night.

A variety of feeds gives better results than any single feed. Grains, animal feed, green or succulent feeds, grit and water are all necessary for best results.

Grains:—Wheat, corn, oats, barley and rye are all good grain feeds. Wheat is perhaps the best single grain for the fowls, but a mixture of these grains is much better than any single grain.

Animal feeds:—Skim milk, butter milk, and beef scraps are the most common feeds in this group. Their chief value is in the protein they contain. A grain ration is low in the supply of this important food nutrient which is very necessary for egg production or good vigorous growth in young chicks.

Green feeds:—Alfalfa, clover, sprouted grains, sugar beets, mangels, for variety and succulence. Grit to aid in grinding the hard grains and supply shell building materials. Oystershell and crushed lime stone are very good.

A supply of fresh water at all times is more important than any other one thing. Fowls will suffer more from the lack of water than from a shortage of food. Keep the fowls busy. Make them work by feeding the whole grain in a litter of straw.

Don't feed baby chicks until they are 48 to 60 hours old. First feed should be fed on a clean surface. Avoid sloppy or wet feeds. Don't over-feed but feed often. Keep chicks busy after first ten days or two weeks. A ration for laying hens composed of wheat 10 pounds, corn 5 pounds, oats 2 pounds, scattered in a litter of straw about 3 or 4 o'clock in the afternoon, give all fowls can eat and have some left over for morning.

Keep a dry mash in a feed hopper before the fowls all the time, composed of: bran 50 pounds, shorts 25 pounds, chopped barley 10 pounds, corn meal when available 10 pounds, beef scraps 10 pounds, when no milk is given. When milk is available give fowls all they will drink and leave out the meat. If the fowls are not on growing green feed, give them at noon all they will clean up in a few minutes, sprouted oats, chopped alfalfa, or chopped beets.

If the fowls get too fat close the feed hopper during the morning and give a little more green feed

### MOTHER'S WAY.

(Continued from page 2)

"All these years we had been doing our own little banking business, so that when we decided to go into a business college as a preparation for a commercial life we knew a good bit about the forms and underlying principles we were required to master. We still own our bank but I have done very little work in it for 6 years. I like the country air. At this season of the year give me the farm every time. Not a day do I miss going out to it. There you have plenty of fresh air and sunshine and pure food and a never-ending variety of interests

"The reason I like the farm so much is because I was taught farm work in the right way. Mother's way was the right one.

"Did you have plenty of dinner? That girl of mine who served it cooked it all. Wife teaches our girls all she knows and I tell them all I know about the business world, and then we send them to experts for the rest. Did you notice that white linen dress my girl had on? She made it herself. Both of our daughters have graduated from college. One is a musician and the other paints our china for us. It is 'mother's way.'"—Breeders Gazette.

### VALUE OF FARM LANDS

#### INCREASING

A problem that concerns all the land owners is the increasing value of land. Whether a man is buying for investment, or if he is farming his land, it interests him because he must increase the production in order to make his land profitable, or else sell to someone who will. The United States Government has just made a report on land values, which are as follows:

The value of farm lands of the United States, without improvements, is estimated at \$45.55 per acre, as compared with \$40.85 a year ago, \$40.31 two years ago, \$38.10 three years ago, and \$36.23 four years ago. The Census reported the value of farm lands in 1910 as \$32.40, and in 1900 as \$15.57 per acre.

In recent years the value of farm lands has been increasing at the rate of about 5 per cent a year, or approximately \$2 per acre per year. The

exceptional increase of the past year may be explained partly by the reaction in the Southern cotton States following a temporary depression last year, and partly by the stimulus given by the war to prices, particularly of grain.

Increases have been general throughout the United States, the only noteworthy exceptions being orchard lands and some irrigated lands in the northwest, which apparently had been overvalued before.

The percentage increase in value of farm lands in the past year by sections of the United States are: North Atlantic States, 10 per cent; eastern part of North Central States, 9 per cent; western part of North Central States, 12 per cent; South Atlantic States, 19 per cent; South Central States, 11 per cent; Far Western States, 11 per cent; entire United States, 11.5 per cent.

The percentage increase in farm land values in four years, that is since 1912, are: North Atlantic States, 17 per cent; eastern part of North Central States, 20 per cent; western part of North Central States, 28 per cent; South Atlantic States, 23 per cent; South Central States, 25 per cent; Far Western States, 34 per cent; entire United States 25.7 per cent.

# Better Investigate Today

You would buy this bargain if you would investigate it. Buy it because it is a good buy and would make you a first class permanent investment. One that the money is in and will always be worth more than the purchase price.

## NOT ALONE AN INVESTMENT—A HOME SITE

A 50 acre farm that will make a high class farm home for you. The thing you have dreamed of and talked about for years.

## SOIL OF EXCEPTIONAL FERTILITY

A rich, black loamy soil that raises excellent crops of Beets, Alfalfa, Grain, Fruit and Garden Truck. Good railroad facilities.

PRIOR WATER RIGHT at \$1.00 per acre per year if used.

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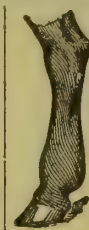


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This market place offers our subscribers and readers a very good place to advertise. If you have something to sell or want to buy here is the place to tell it. These advertisements are read because they offer bargains, your bargain should be here. Take advantage of this opportunity today.

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## Gem Herd of Improved Chester White Swine.

This Herd Bred, Raised and Sold. Both Boar and Sow Grand Champions the World's Fair held at Frisco is last year. Both Sire and Dam, still in the herd. If such breeding interests you, write for illustrated catalogue. Stock of all ages for sale all times.

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Herd Sires: Rag Apple Korn- dyke 13th, Grand Champion Utah State Fair 1915. Sire Ray Apple Korn- dyke. Dam Fairview Mabel Korn- dyke. A. R. O. record as a 3 year old 25.51, Bt 4.83 fat. Rag Apple Valerie. Sire Rag Apple Korn- dyke 13th, Dam, Princess Valerie. A. R. O. record 1.00 Bt from A. R. O. Dams.

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Richmond Utah

## HOLSTEIN BULLS FOR SALE

ons of Wachusett Creamelle George 2nd whos daughters have made from 0 to 500 pounds of butter fat a year at with ordinary care. Wachuett was prize aged bull at the State Fair last 11 and all of his get were first in their ass but one. His dam gave 105 pounds milk in a day that tested better than per cent. No. 1 Iowa George 3rd fine 18 months old son of Iowa Blanth Alberkerk. A high testing heifer from Iowa Farms, Iowa, her dam has 19 pound record. This young bull was Junior Champion at the State Fair. The st check for \$200 takes him. No. 2 Wachusett Beauty a 12 month old son Maudeline Of Beechwood Beauty with 23 pound butter fat record, -milk test 1. She is a full cousin to Colantha Johana, \$150 buys this one. Take chances, get a bull from a proven sire and one that has produced the goods. After several others from 6 months to 1 year old from \$75 to \$125 each.

J. W. STUBBS

Charleston Utah

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4—BEST LAYING STRAINS—4  
Rose Comb Rhode Island Reds and White Wyandottes, Single Comb Black Minorcas and White Leghorns. Egg fertility and stock guaranteed. Write your wants. E. C. Blanpied, Box 60, Milford Utah.

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From our own S. C. White Leghorns, selected as layers from stock "bred to lay" for four generations. Eggs for hatching from these and S. C. R. I. Reds. Book orders now. Bates and Sons, Provo, Utah, R. F. D. No. 1—Box 310. Breeders of Airedale Dogs. Write us.

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At rate of 3 for a \$1.00 or 10 for \$3.00. Order from this ad.  
B. F. ELIASON  
Moroni Utah

Wanted to hear from owner of good farm for sale. Send description and cash price. R. G. List, Minneapolis, Minn.

When you answer advertisements, tell them you saw it in Utah Farmer.



## LAST YEAR WE COMPLETELY SOLD OUT.

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Virginia Jesse S. Richards Mgr. Idaho  
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## UTAH HATCHED WHITE LEGHORN BABY CHICKS \$11.00 PER 100

Circulars, order-blanks, etc., upon request. Candee Colony Brooders carried in stock.

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## Pure Bred Unrelated DUROC JERSEY PIGS FOR SALE

\$5.00 apiece.

**H. RONNENBERG**  
Murray R. F. D. No. 3

**WYANDOTTES**  
Beautiful, useful and profitable. Best for showing; best for egg-laying; best for table. Largest Wyandotte Farm in Southwest and only complete family of Wyandottes known. Eleven varieties and each from finest strain bred in United States. Write for full particulars. **VILLA WYANDOTTE FARM,** Villa Road Lamanda Park, California.

Lumber, Cedar Posts, Millwork. Save big money, guaranteed quality. Write for price lists or send bill of material for quick estimate. Farm Buildings Plan Booklet free. Western Lumber and Millwork Company, Tacoma, Washington.

## FOR SALE

Registered Duroc Jerseys  
100 fine, youngsters and some fine brood sows.

**PULLUM FARM**  
R. D. Box 40 Trenton, Utah

As good as new, has not had four months use, a No. 5 Oliver typewriter for sale cheap. Address D-201 East Broadway, Salt Lake City, Utah.

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## A TEST WHETHER

### ADVERTISING PAYS.

In talking recently with a man who has made a large success as an advertising salesman in another place, this question was asked him: "When a merchant says it does not pay to advertise, what do you tell him?"

"I just ask him this," was the reply. "What proportion of the population of this town has been inside your store during the past two months?"

Very few merchants ever claim they have had 10 per cent of the population. Most of the non-advertisers would be glad to get one per cent. A lot of them probably get only a small fraction of one per cent with any regularity.

"Then I go on," he continued, "How are the people going to know about your goods? How can they tell whether it would be for their advantage to patronize you or not? A great many of them rarely or never pass your store. The great majority that pass give you only a glance. You are not getting their business, having done nothing to interest them."

"Then I go on," he continued, "to say there are just three ways to get some of this trade now slipping past them. They can send around solicitors from door to door distribute circulars or hand bills, or advertise in newspapers. The newspaper notice is read carefully where a solicitor is summarily turned down, and besides the advertising is 20 times cheaper than canvassing. And hand bills are chucked into the waste baskets, while newspapers are read. If you don't care to use any of these methods, I tell them, most of the people of this town will continue to pass you by, without knowing anything about your goods."

These remarks fit here as well as in the town where they are made. A merchant must tell the public about his goods in order to get trade.

One of our advertisers told us recently that of the hundreds of items advertised with us he sold all except one and that he had numerous inquiries for that one. These were classified adds, but the same truth holds good of our readers and displays.

Last week we found a purse for a party who advertised. Once before it was a \$10.00 bill that was recovered through advertising. Now Mr. Merchant what can we sell for you today?



**No such power  
in any other car  
unless you pay  
nearly \$200 more**

**Overland**  
TRADE MARK REG.  
**35 horsepower**

**\$695**

Roadster \$675  
Model 83B f.o.b. Toledo

As a rule automobile prices vary according to power.

The \$695 Overland is the one big important, outstanding exception to the rule.

Because we build twice as many cars as any other producer of automobiles of like class—

We can price this car way below its power class—nearly \$200 below.

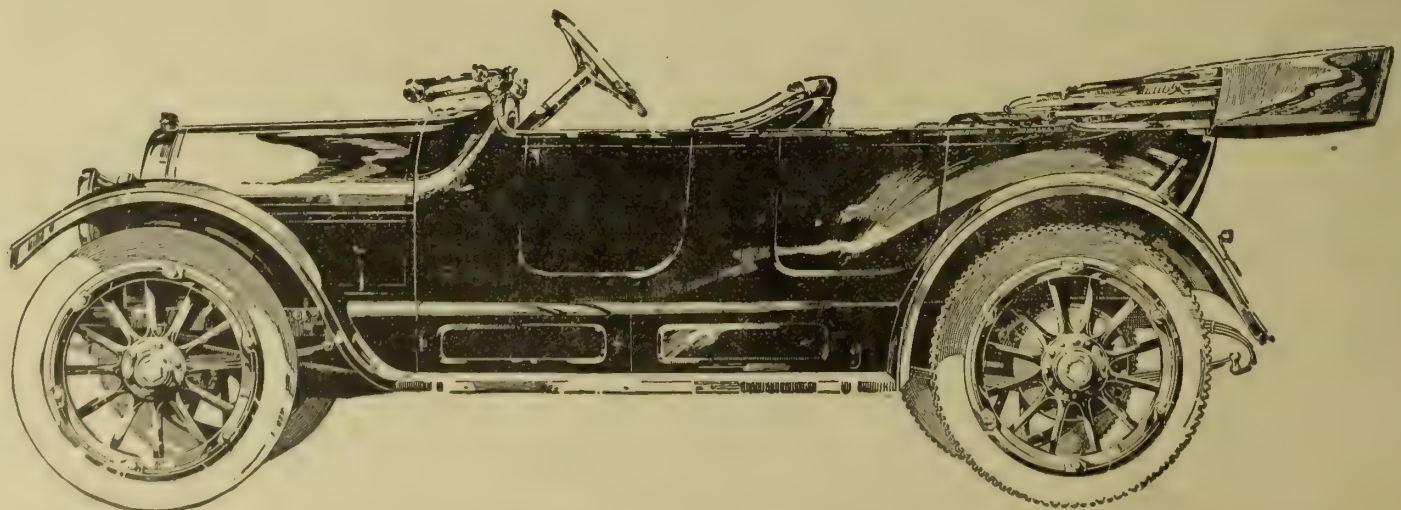
Another heavy shortage this spring is almost certain.

Order yours now to avoid delayed delivery.

Catalog on request—please address Dept. 650

**The Willys-Overland Company**  
Toledo, Ohio

"Made in U. S. A."





# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region

OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE

VOLUME XII; No. 42.

LEHI AND SALT LAKE CITY, UTAH

MAY 20, 1916

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College of Agriculture  
University of Illinois



## NEAR THE MOUTH OF THE CANYON.

A farm or ranch can nearly always be found at the mouth of the canyon. The rich soil, plenty of water and the nearby grazing lands, are some of the advantages that cause men to locate their home or ranch in a place of this kind.



## Practical Hints On Concrete Construction

During the course of an illustrated lecture relating to concrete construction on the farm, the speaker, who had traveled throughout all the important agricultural districts east of the Mississippi taking notes and photographs of various examples of concrete construction on hundreds of farms, was asked what proportion of farm work of this character resulted in failure. He replied that failures were exceedingly few, and that if farmers were instructed as to the use of proper aggregates, failures would become practically unknown.

The following brief instructions concerning the essentials of good concrete have been prepared for the information of farmers, who will find them convenient as reference data. If strictly observed they will insure satisfactory results.

### Aggregates to be used in Concrete Construction.

The sand, stone, and gravel usually found upon the farms of the United States are generally suitable for concrete construction, provided the following precautions are taken:

1. These aggregates must be free from vegetable matter, dirt, or other foreign substances.

2. When using bank-run gravel, the sand must be separated from the stone or pebbles by screening through a ¼-inch screen.

3. In small concrete structures, such as drain tile, fence posts, etc., the coarse aggregate (crushed rock or gravel) should range in size from ½ inch to ¾ inch. For larger work, such as silos, barn floors, ordinary foundation, etc., coarse aggregate should range from 1½ inches to ¾ inch.

4. The sand used should be coarse, hard, and clean, and graded from ¼ inch to fine, with the larger size

predominating. Use great care in hand mixing. It is economical to buy a small machine mixer if the farmer intends to use concrete in large quantities.

### Hand Mixing

Proper methods when concrete is mixed by hand, using a two bag batch of 1:2:4 proportions, are as follows:

1. Size of measuring box for sand should be 2 feet square by 1 foot high, thus containing 4 cubic feet.

2. Load sand in wheelbarrows and wheel onto mixing board.

3. Fill sand-measuring box, lift and spread sand 4 inches thick over board.

4. Take two bags of cement, place contents as even as possible over sand.

5. Turn the sand and cement over until thoroughly mixed, so that no streaks of cement or sand appear.

6. Spread the mixture of sand and cement out carefully, place measuring box beside it, and fill twice with stone or gravel, then empty onto sand and cement mixture and mix thoroughly.

7. Add three-quarters of required amount of water slowly and evenly, at the same time mixing the mass.

8. Continue mixing, adding balance of water when dry spots appear, until whole mass has been turned over three or four times. This should be sufficient. After final turning shovel into compact mass ready for wheeling to place.

### Bank-run Gravel

Bank-run gravel is sometimes used as it comes from the bank. This is wrong, as no two places in a bank will have the same proportions of sand and pebbles. It is, therefore, always essential when using bank-run material to screen the sand from the gravel and remix in the proper proportions.

### QUANTITIES OF MATERIAL FOR ONE CUBIC YARD OF RAMMED CONCRETE

(Table from Taylor and Thompson, "Reinforced Concrete.")

PROPORTIONS BY PARTS			PERCENTAGE OF VOIDS IN BROKEN STONE OR GRAVEL								
			50 Per Cent.*			45 Per Cent.†			40 Per Cent.‡		
Cement	Sand	Stone	Cement, Bbls.	Sand, Cu. yd.	Stone, Cu. yd.	Cement, Bbls.	Sand, Cu. yd.	Stone, Cu. yd.	Cement, Bbls.	Sand, Cu. yd.	Stone, Cu. yd.
1	..	2	3.57	..	1.06	3.37	..	1.00	3.20	..	0.95
1	..	3	..	..	..	2.60	..	1.16	2.45	..	1.09
1	2	3	1.81	0.54	0.80	1.74	0.52	0.77	1.67	0.50	0.74
1	2	4	1.58	0.47	0.94	1.51	0.45	0.89	1.44	0.43	0.85
1	2½	5	1.31	0.48	0.97	1.24	0.46	0.92	1.18	0.44	0.87

\* Use 50 per cent. columns for broken stone screened to uniform size.

† Use 45 per cent. columns for average conditions and for broken stone with dust screened out.

‡ Use 40 per cent. columns for gravel or mixed stone and gravel.

### WHY MEN DON'T GET AHEAD

The man who very seldom finds time to read will have a hard time to grow bigger, and the man who does not grow bigger will grow smaller, and his business will follow the lines of his own development.

One has to progress or retrogress in this world, and what is true of the

individual is true of his business.

What one learned yesterday may not be true today, and no man is safe in blindly following the principles that he learned in his school days.

The world moves and the only way to keep pace with its progress is by reading.—Implement and Vehicle Record.

## LET THE CHILDREN STUDY MUSIC

IT MAKES BETTER CHILDREN OUT OF THEM AND THEY WILL APPRECIATE IT WHEN THEY GROW UP.

Music makes the Home Life pleasant. The entertainment they will provide and the enjoyment you will get out of their ability, in your declining years, will more than recompense you.

### START THEM NOW---BY MAIL

Our courses of instruction are written by the best talent that can be gotten together and are endorsed by the leading instructors of the West.

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By Prof. J. J. McClellan.

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Get the information regarding our courses.  
No obligation on your part.

COURSES IN—VIOLIN, VOICE, ORGAN, BAND  
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## Utah Conservatory of Music

Templeton Building

Salt Lake City, Utah

MAIL THIS COUPON TO US—TODAY

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Templeton Building, Salt Lake City, Utah.

Gentlemen:—Send free—information regarding the course checked.  
It is understood that I am not obligating myself in any way.

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Devoted to Agriculture in the Rocky Mountain Region

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A YEAR.FOREIGN  
SUBSCRIPTION  
\$1.50

VOLUME XII.

LEHI, UTAH, SATURDAY, MAY 20, 1916.

No. 42

## Seedling and Grafted Walnuts and a Method of Grafting

By Leon D. Batchelor University of California, Citrus Experiment Station,  
Riverside, California.

Many unsuccessful attempts to graft the walnut have been made by nurserymen familiar only with the propagation of apples, pears and stone fruits. The growing interest in walnuts in the mountain states demands that greater knowledge of the propagation of this tree by grafting. As walnut culture becomes more thoroughly tried out in the above states, the demand for grafted trees will increase, providing certain varieties prove well adapted to this area. The present planting of seedling trees will furnish material from which to choose the varieties of the future. In this capacity the seedling trees are a great asset, for seedling plantings have usually been the forerunners of staple fruit growing based finally on grafted varieties. Seedling apple orchards preceded the standard grafted varieties and in fact furnished the varying material from which to select these varieties. Seedling almond and orange groves preceded the grafted groves of California. So too, with the walnut groves, the wide range of variation among seedling trees gave a source for selection of the grafted varieties. Walnuts will not come true to seed, as is also the case with apples; they may follow certain types, as the Franquette or Soft Shell type, but this is equally true of the Northern Spy and Femeuse Apple seedlings. Each seedling nut tree is a distinct individual, bearing a nut peculiar to itself, and with its own season of harvest, which may be two weeks earlier or later than the adjacent tree. The range in productivity is often very wide among such trees, certain specimens may produce less than ten pounds, while neighboring trees may yield two hundred pounds.

The seedling plantings then, may be the foundation of commercial growing in the mountain states, but such an industry will eventually depend on the grafted varieties very probably selected, in part, from some of the local seedling trees. Thus the planting of seedlings should not be discouraged entirely as it may be a very necessary means of selecting varieties best suited to the conditions in question. The varieties of walnuts which are being most widely propagated in Southern California and which are best adapted to that section, are the ones which originated in that vicinity. The same is true with reference to the almond varieties of central California. From the seedling walnuts of the mountain states may come the grafted varieties of the future, better suited to the local conditions than any of the California or French varieties now being planted there. If such superior individual trees are discovered from time to

time they must be propagated asexually, that is, by grafting or budding, if their good characteristics are to be preserved.

In considering the propagation of the walnut, it is only possible to describe one method within the space given this article. Nurserymen do not entirely agree on the best methods of propagation and no doubt there are other styles of propagation which might be found to serve as well as

the one described below. The following method of grafting the walnut is practiced by quite a large number of nurserymen. It is simple to learn, and, when carefully carried out, is highly successful.

Black walnut seedlings which are usually used as root-stock, should reach a proper size for grafting after one year's growth in the nursery. The most desirable size will vary with the size of the scion wood. Trees three-

quarters to one and one-half inches in diameter at the surface of the ground can be most readily handled.

The most favorable season for grafting is the period just before the seedling trees begin to leaf out in the spring. The grafting should be done, if possible, before the bark slips readily, which is about the time the leaves appear on the black walnut.

The first operation in following this method of grafting consists of hoeing away the soil from the base of the seedling tree to expose the trunk down to the crown. The young tree is then cut back near the level of the ground. A sloping cut is then made one side of the stub, and then split on this side as shown in Fig. 1. A scion with two buds is selected and a long sloping cut is made on the base end opposite the lower bud. The scion is then split between the bark and pith on the longer side, extending nearly to the bud. This split should be made nearer the bark than the pith so only a thin chip of wood will be attached to the bark. The scion thus prepared is inserted upon the stock as shown by fig 2., making the two fit together as firmly as possible. As in general grafting, the cambium layers or inner bark of the stock and scion should come in close contact. To best accomplish this work the operator should have a very sharp knife with which to make clean cut surfaces.

The scions are tied in place with soft cotton twine or raffia fiber, by wrapping it tightly about the union of the stock and scion, as shown in Fig. 3.

The union is thoroughly waxed, after tying. The top of the scion should also be covered with wax. A grafting wax to be applied hot is best for this purpose. The hot wax makes a much better air-tight covering than the common grafting wax used in top working apple trees. Various formulas are used for making this wax; the following has been found satisfactory:

Resin.....	4 pounds
Beeswax.....	1 pound
Linseed Oil.....	1 pint

The resin and beeswax are melted and thoroughly mixed with the oil while in a liquid condition.

After waxing every cut portion of the stock and scion, the soil should be hoed back again about the tree, covering the scion completely.

A fine sandy loam soil is desirable for a walnut nursery as it is quite important that the soil be free from lumps and stones when it is hoed back over the newly set scions. If the scions send up more than one sprout, only one should be allowed to develop, thus making a single trunked, straight young tree.

Fig. 1

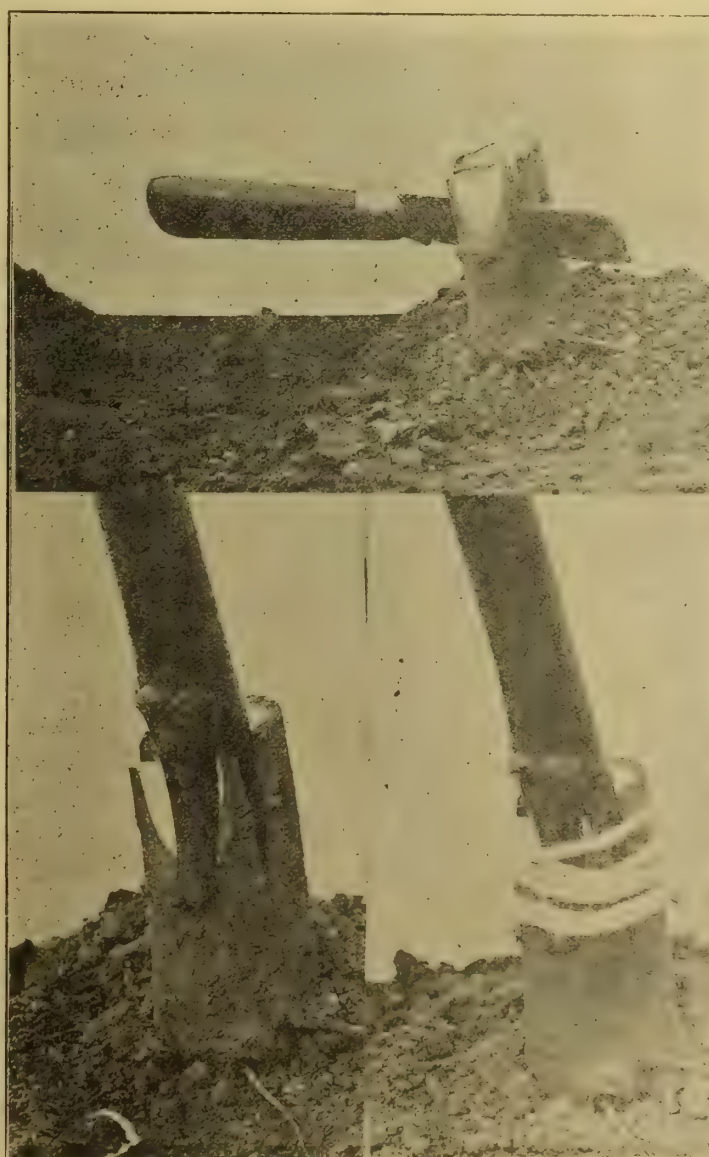


Fig 2

Fig. 3



## DAIRYING

### IMPORTANCE OF CLEANLINESS AROUND THE DAIRY.

C. V. Jones, State Dairy Inspector  
Michigan.

To fully appreciate the extreme importance of cleanliness around the dairy, the dairyman must bear in mind that bacteria commonly found in milk are miniature plants, and like all plants, such as wheat, corn and grasses, require three things for their growth, namely, soil, moisture and proper temperature.

Milk is an ideal medium for the development of all kinds of bacteria. Bacteria, like all other plants, require food, and milk is a good food. Milk is well supplied with water, and the casein or curd of milk forms a good soil, or food for bacteria to grow upon. And when milk is first drawn from the udder of the cow it is at a temperature best suited to the most rapid growth of the types of bacteria commonly found in milk.

Where do the bacteria come from? It should be borne in mind that the bacterial content of milk, largely, comes from some source external to the cow. It is a fact that some of the bacteria of milk come from the cow directly, but with few exceptions these bacteria are harmless, having power to curdle or sour the milk only. The dangerous type of bacteria found in milk, almost invariably, reaches the milk through some outside agency.

Since the vast majority of bacteria found in milk reaches it through external sources, it is self-evident that the number of bacteria finding their way into milk may be more or less controlled by the dairyman. Thus, all reforms in the dairy world fostered by HEALTH BOARDS, and PURE FOOD COMMISSIONS, are designated to accomplish several ends, namely,—1st, to eliminate, as far as possible, all diseased or unhealthy animals from the dairy herd. 2nd, to guard the milk from becoming contaminated after it leaves the cow's udder until it finally reaches the consumer. 3rd, to assist the dairyman to bring about conditions around the dairy that will tend to lessen the number of bacteria finding their way into the milk, and as far as possible, to produce conditions that will prevent the growth and multiplication of the bacteria that unavoidably get into milk.

The dairyman frequently argues that milk inspectors often make de-

mands upon him that he cannot afford to meet and sell his product at the ruling prices. He also frequently feels that many of the precautions are unnecessary, and that suggested departures from the old methods are trifling and unimportant, at the same time, imposing upon him an unnecessary expense and inconvenience. He forgets that conditions are continually and rapidly changing, and that the demand for a clean and sound milk is greater and more emphatic today than ever before.

The dairyman should remember that observance of these precautions, on his part, and his endeavor to meet the demand for a purer milk will hasten the day when he will be able to ask a higher price for his product and receive it. He should also remember that it is the non-observance of sanitation and cleanliness around the dairy and stables that is a cause for so much butter, cheese and milk being sold upon the market at a loss to both the producer and manufacturer alike.

When the dairyman shall have learned, better, how to produce clean milk, and shall have come to give greater attention to the vast need of cleanliness and sanitation both around the dairy and stables, and shall pay strict attention to the cleanliness of all utensils used around the dairy, such as pails, cans, strainers, strainer-cloths and cream separators, and shall make it his chief business to determine that the udders of the cows are properly cleaned before the milking is done, and that the person and hands of the milker are in fit condition to insure milk free from external contamination, and shall also have a proper regard for the importance of cooling the milk and keeping it cool until delivered to the consumer or manufacturer, he shall have hastened the dawn of greater prices for both the milk and its products.

The demand for a purer milk, and for greater care in its production is growing steadily, and this demand will be more and more strictly enforced.

To meet the demands for a purer milk, the dairyman must pay especial attention to the following requisites so closely related to the production of clean and wholesome milk.

1st. HEALTH OF COWS:—The dairy herd should be inspected, periodically, by a exterminator, to determine their soundness; and no animal suffering from contagious disease, especially disease of the udder, should be allowed to contribute to the milk supply. It would be almost impossible to over-rate the importance of excluding tuberculous cattle from herds contributing to the public milk supply, particularly where milk reaches the public in its raw, or unpasteurized state. The dairyman who would gain the confidence of the milk consumer will have his dairy herd inspected at intervals, and apply the tuberculin test to all of his cattle, and any animal that reacts must be taken away from the rest of the herd.

The udders of the cows should be watched carefully, and when there are any signs of inflammation or disease, or where there is an appearance of gargetty or bloody milk, the animal's milk should be discarded until she has completely recovered. To insure



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Then if you go a step farther and turn the cranks of the two machines side by side for fifteen minutes, running milk or water through the bowl, you will see still more difference.

And if you will run the two machines side by side in practical use, as any De Laval agent will be glad to have you do, the De Laval one day and the other machine the next, for a couple of weeks, you will see still greater difference in the work of the two machines.

Every De Laval agent considers it a privilege to show the difference between the De Laval and other separators and to afford every prospective buyer the opportunity to try out and prove the difference to his own satisfaction, if on first examination he feels the slightest doubt about it. If you don't know the nearest De Laval agent write to the nearest office as below.

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healthy cattle they must be given a fair amount of out-door exercise, and allowed to breathe plenty of fresh air.

2nd. STABLES:—The stables must be light, airy, dry, clean and comfortably warm. There should be, at least, three square feet of light for each animal in the stable. Many of the "City Health Boards" demand five square feet of light for each animal confined in stables. Light is Nature's great disinfectant. Stables should be airy. Each cow should have, not less than, four hundred cubic feet of air space, and when the cattle are turned out into the yard, as they should be daily, except in extreme weather, the stables should be properly aired. It is important that dairy cattle spend a portion of the day outside, and the length of time so spent should be regulated by the temperature and condition of the weather. Cattle giving

milk must not be exposed to the cold rains or zero weather, but if the weather is clear, and not too cold, they should be given ten or fifteen minutes out-door exercise daily. Each dairy barn should be equipped with a good system of ventilation. The stables should be dry. Where the walls and ceiling of the stables are unduly damp the cause may frequently be traced to faulty ventilation.

Wherever possible dairy barns should be built upon high and dry ground, and surroundings kept clean by removing the manure a good distance away. This may easily be done by using a litter carrier. The stables ought to be cleaned daily, at least, and not less than two hours should elapse between the cleaning of the stable and milking time. The interior of the stable should be smoothly finished. Floors should be made of cement, and should be made smooth except where the cows travel so as to make easy their cleanliness and sanitation. The ceilings and walls should be close and smooth, and should be white-washed every six months. This can be easily done by a spray pump. White-wash disinfects and makes the stable light and clean. Dust and cobwebs should receive special attention, for these form traps for the accumulation of dirt, and are also sources of bacteria that find their way into milk, and contaminate it. Cattle should be supplied with plenty of clean bedding.

It is very important that the cows be confined in some form of stable that will tend to keep them clean. If the dairy farmer feels that he cannot afford the expense of putting in modern stanchions with gas pipe fittings, he can use the so-called model stall which he can build himself at a very low price and it will keep the cows absolutely clean. Details and specifications of this stall will be furnished by this Department on request. Write to the State Dairy & Food Department, Lansing, and ask for the Bulletin on Clean Cows and Clean Stables.

DAIRY EMPLOYEES:—To insure clean and wholesome milk, it is necessary to pay considerable attention to the personnel and habits of the persons employed in the dairy. In the better class of dairies, those who do he milking wear white linen coats and trousers. White is preferable to dark clothes since it shows the dirt when soiled. The clothes of the milkers should be made of washable materials. It has been determined on careful investigation that bacteria from the hands and clothes of the persons milking the cows, and handling the milk, is often more dangerous than those from other sources. Hence, it is becoming common in the best class of dairies to insist upon a thorough washing and drying of the hands of the milkers before milking commences. No one should be permitted to handle any milk, or to wash or handle the milking utensils in any way, who is suffering from any contagious disease. Also the use of tobacco should be strictly forbidden around the dairy. Any farm upon which there is a case of typhoid, scarlet fever or diphtheria should not be allowed to furnish milk to the public, without first obtaining a permit to do so from a competent health officer.

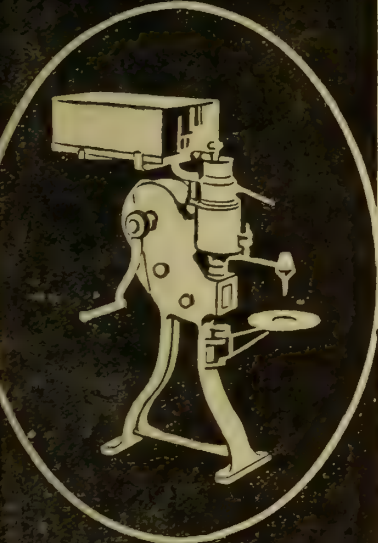
GUARDING THE MILK:—We have seen that most of the bacteria in ordinary milk comes not from the udder of the cow, but from some external source, hence the greatest caution

(Continued on Page 13)

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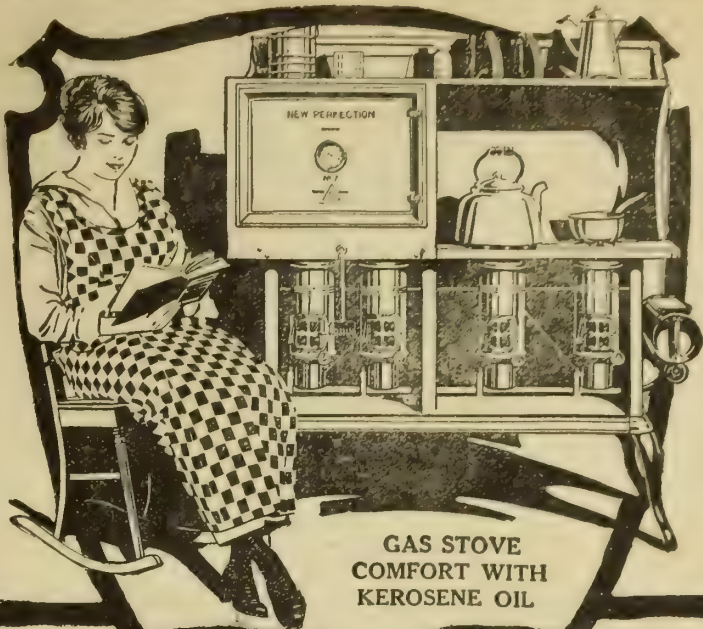
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with the first taste. It's so pleasing it creates an appetite for itself—you want more. It fills the bread part of any meal to the satisfaction of all.



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If you do not have enough live stock on your farm to eat all the hay and feed you produce, make every effort to secure enough now, and get the kind that will be a profit to you, whether you buy dairy or beef cattle, horses, sheep or hogs.

It costs but a few cents for enough flower seeds to plant a bed of flowers that will be an added attraction to your home; not only for your family, but for the neighbor. There are very few people who do not admire a flower garden. It is not too late even now to plant some flower seeds.

Burn the dry weeds from the ditch banks, or the seeds will fall into the irrigation water and be carried out onto the land. Encourage your neighbor to do the same thing, because the seeds from his ditch banks are just as apt to flow onto your land if the water first passes through his land on the way to yours.

People do not always appreciate their home institutions. The case we have in mind is the work being done by our Agricultural College. Some people over in Wisconsin are taking advantage of the correspondence courses that are offered by the Utah Agricultural College, and are very enthusiastic in their praises of the advantages that they have been able to secure.

When riding through one of our old farming districts, our attention was called to the number of alfalfa fields that were being "run out" by dandelions, and cheat grass. Some of these alfalfa beds have been undisturbed for fifteen or twenty years, and should be plowed up. After a year or two of producing other crops, they could then be planted to alfalfa again and they would again produce abundant crops. It is a poor policy to try and hold an alfalfa stand for a great number of years. Rotate your crops, and get better results.

Some people seem to have the idea that cows can be turned out on a poor pasture and produce their regular milk flow without being given some feed. Pastures are good for dairy cows, but if it is a poor salt grass pasture, cows should be given a little feeding night and morning. Remember, the cow acts as a machine, and if she is not given the right kind of food it is impossible for her to produce a reasonable amount of milk. Some people do not seem to have any better understanding of feeding their dairy cows than did the city girl, who was visiting at a farm. She accused the farmer of being dishonest, and selling adulterated milk, and when asked why she said, "this morning, with my own eyes, I saw him water the cows just before he milked them."

#### WHY TREES?

There is probably nothing which costs as little but enhances the value of property as much, as do trees. Even the casual traveler, passing through a town on a railway train, notices beyond anything else the presence or absence of trees. "A homelike place," or "A barren looking hole," is his comment.

The impression is stronger if a man is looking for a home. If it is in town, he wants trees on the streets, on the parking in front of the house, and in the yard. On the farm, he likes a house surrounded by a pleasant lawn planted with trees and shrubbery. He is willing to pay for them. Instances are not uncommon where the value of good sized farms has been doubled by surrounding the house with an attractive garden, lawn and trees.

More important than money value, however, is family comfort. In an agricultural country trees are necessary for family comfort. Only nomadic races that depend largely on trading, live on unforested plains. There should be trees on every home place.

#### EXPERIMENT STATION.

We are often asked—what is the work of the Exp. Stations. First of all they are part of the state and it is our taxes with an allowance from the United States government that maintains them. Let us answer the question in this way—suppose 500 people wanted to know the results of some one experiment, it is more economical to support an experiment station to conduct the experiment than for each of the 500 people to conduct the experiment separately.

The superintendents in charge of these experiment station devote their whole entire time to it while others would have other duties to perform and for this reason could not do the work so well. The stations try to conduct those experiments that will benefit the greatest number. They have to plan or look ahead for several years when they outline their work.

Do the people understand this? Do you keep in

touch with the work of the station? Do you get the bulletins they publish, if not it seems to us that it is your fault and you ought to take advantage of this opportunity to do so.

#### ENFORCE THE WEED LAW.

Once we realize the great price that we are paying for weeds, we will do something to see that the present laws are enforced. We will go farther, we will see that better based laws are enacted.

The thing to do under present conditions is to see that the weed laws we have now are enforced. Petition the county commissioners and have them appoint some one to enforce the law. At present we allow weeds to grow on our public roads, private roads, ditch banks and other places producing enough to seed our lands even if we kept our farm lands free from weeds.

Did you examine your seeds this spring, and see how many noxious weed seeds they contained? If you made an effort to secure pure seed, free from weed seeds, you know how hard they were to find. One way to help this situation is to see that the weed laws are enforced,

#### CLEAN ADVERTISING.

About four years ago the Utah Farmer received a contract for advertising tobacco. We ran it in a few copies of our paper, but soon found out that any kind of tobacco advertising was contrary to the high standard we had set for our paper.

Some publishers, and even a few of our friends, thought we were a little too ideal in our aim, but time has proven we were just a little ahead of many others who must follow.

The stand we took against tobacco advertising is now being emulated by many large publishers in the East. The Curtis Publishing Co., will accept no more after present contracts are completed and they are only one with many others.

Publishers who wish to retain the patronage and good will of the best people must make some distinction in the class of advertising they permit to enter their publications. They cannot afford to send into the homes each week or month any moral and physical welfare of their readers. This applies just as much to the advertising pages as it does to the reading columns. No more can they do this with impunity than they can send impure foods into the homes, for suggestive and misleading reading matter poisons the minds as harmful foods injure the body.

There never was a time when advertisements were as widely read and used as now. This is an age of advertising. Every business is coming to recognize that it must advertise if it expects to exist. And the demand for truthful advertising was never greater. The time is past when any kind of a statement can be put into an advertisement. The careful, conscientious publisher reads and blue pencils this part of the copy for his paper just as closely as he does any other, so it has come to be that papers that stand for the upbuilding of character and good citizenship carry only advertising that tells the truth and that tends to uplift and educate rather than degrade and impair the intellect.

We are glad that the Utah Farmer was one of the first to take the stand for clean advertising—that our columns are kept free from anything that is detrimental to clean, honest living.



# Why You Should Fallow

By Prof. J. C. Hogenson.

## Agricultural Lesson.

The practice of leaving the land fallow uncropped every other year is followed on most dry farms. This method results in better yields than where the land is continually cropped. In fact, where the land is cropped every year twice the amount of work must be done to secure a smaller and inferior crop. The practice of fallowing originated in ancient times, and is an outgrowth of the inferior implements of tillage used at that time which did not stir the soil sufficiently to render available enough plant food, so that it became necessary to allow the soil to weather and thus bring into use new decayed material. On many well conducted farms intelligent rotation has been made to accomplish the results desired by fallowing. A knowledge of the feeding habits, and needs of various plants enables the wise farmer to grow these crops in such succession that plant food will be available to the crop when most needed.

Fallowing also helps greatly in eradicating troublesome weeds. This however, can also be accomplished by proper rotation. On our dry farms, it is not so much the accumulation of plant food that we desire, as it is the conservation of moisture for the succeeding crop.

By proper methods of fallowing and tillage the precipitation of two years may be stored in the soil and can be drawn up by the crop when needed. On many irrigated farms wheat has been continually grown on the same land for twenty-five years, and without any appreciable decrease in the yield. This proves that plenty of plant foods exists in our soils. This cropping would be impossible on the arid farms, not because of lack of fertility, but for lack of moisture and experience has shown that where the moisture of two seasons is used in the production of one crop, better results are obtained. Alfalfa, of course, can be grown but it must be remembered that this plant sends its roots deep down into the earth in search of water, while wheat and other cereals draw only from a limited area.

On the dry farms in the state where the soil is sandy it may be wise to grow green crops, and plow them under when they are coming into head. The addition of this vegetable matter to the soil not only adds plant food, but also helps the soils in absorbing and retaining moisture.

Where bare summer fallowing is practiced it is rarely necessary to plow more than once, this should be done as soon after the removal of the crop as possible. Surface tillage is usually sufficient to keep the ground free from weeds, and give the land such preparation as to make a good seed bed, and in keeping the surface loose so as to retain the moisture. For arid farm crops, those which have a deep well developed root system succeed better than those with a small shallow root system, because they are able to reach farther in their search for moisture.

In general, the cultural methods used on dry farms should be such that very little water is allowed to evaporate from the surface. Water rises to the surface of the soil by capillarity. If these capillary tubes

are not broken off, water will continue to evaporate. Mulches have been found most effective in checking this evaporation. Mulches may be either natural or artificial. Natural mulches are formed by cultivating or harrowing the land, thus rendering it fine and loose, and also breaking its connection with the under soil. This surface soil soon dries out, and forms a protecting blanket for the under soil. After each heavy rain storm the ground will have become sufficiently packed to again connect with the under soil and capillarity again restored. After each storm there should be a new mulch formed by cultivating. Artificial mulches are made by spreading manure, straw or other litter over the soil, while these help to a certain extent in conserving the moisture, they are not so serviceable or so hardy as are natural mulches.

On dry farms wherever it is possible level cultivation should be practiced as by that means the least surface is exposed to the air.

The implements necessary to successfully run an arid farm are, a good plow, either disc or mould board, if the subsoil is hard, a subsoil plow also, a press drill, a roller, disc, cultivator, acme harrow, spike tooth harrow, weeder, header, and, if possible, also a thresher. Of course, in the case of a large farm, a tractor engine may be used in place of horses. If money for the purchasing of machinery is not available, a half a dozen or more farmers may unite and form a co-operative association, and together purchase the needed outfit.

## AN APPEAL TO UTAH FARMERS.

Planting time is not yet over. We hope every farmer in Utah will plant every available acre this year. It is not generally known, but for more than a year now a great many thousand people in Belgium have existed solely on what has been sent them from the United States. All the belligerents agreed that American food ships should not be disturbed in ministering to the destitute of Belgium. Except for this interposition very many thousands would have died of starvation last winter. The call is almost as great in northern France, quite as great in Poland and Servia and there is grave danger that when the winter again closes down, whole states of Europe will be upon the very verge of starvation.

The governments will manage some way to feed their soldiers in the field, but the great cry will come from the women and children. The thought of it is enough to paralyze generous men and women. The help will have to go in most part in grain and salted meats. Utah farmers should make extra exertion to have increased crops this year.

In truth a great many Utah people cannot understand why living in Utah should be so high. Last week spring chickens were selling for prices which indulged in largely would bring a famine. Every incentive should urge the farmers to plant a great crop this year.

If two or three more sugar factories are erected in Utah we are not certain that some generous outside state will not have to start a line of relief

# CATERPILLAR

Reg. U. S. Pat. Off.

Don't say Caterpillar unless you mean Holt!

## for a cheaper harvest



For harvesting as well as for plowing, hauling, and other tractive work, the Caterpillar proves itself more profitable than any other tractive power. It gives steady service under the most severe conditions. It works without delays—saves trouble, saves labor, saves expense in your harvest. You can't work horses or mules as cheaply; other tractors won't give as care-free efficient service.

You needn't mind the grades nor the condition of the soil—the Caterpillar has plenty of surplus power for the hills and its track prevents slippage or loss of power in soft or ashy ground. After harvest, it's ready for other work—plowing, hauling or clearing.

If you want to get maximum profits, buy an outfit that will earn them—a Caterpillar Tractor, and a Holt Combined Harvester. Investigate these machines now—ask for our new 1916 Harvester Catalog, or Folder 1 E 337 on our Caterpillar line. A postal request brings them.

## The Holt Mfg. Company

Incorporated

STOCKTON, CALIFORNIA

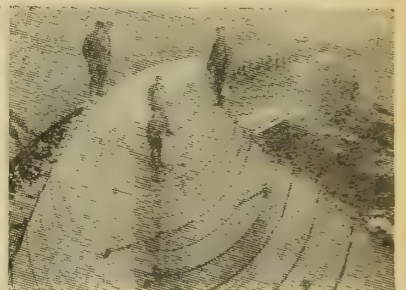
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CONSOLIDATED WAGON & MACHINE CO., SALT LAKE CITY, UTAH.

The Caterpillar Tractor and Holt Harvesters were awarded the Grand Prize—highest possible award—at the San Francisco Exposition.

If you are losing 60% of your water through SEEPAGE, which is the average loss in irrigation ditches, use our LENNON Smooth Flume for Ditch Lining. Instead of building dikes to carry water across your low places, use Flume. It will not leak and will pay for itself the first year, by the water it will save you. Made in all sizes. We sell everything for irrigation.



## UTAH CORRUGATED CULVERT & FLUME CO.

Woods Cross, Utah.

OPENED JAN. 15<sup>TH</sup>, 1913



"The HOTEL that's BEST in all the WEST"

WHEN IN LOS ANGELES STOP at the NEW FIRE PROOF HOTEL NORTHERN EUROPEAN 200 OUTSIDE ROOMS 150 WITH BATH 420 W. 2<sup>ND</sup> ST. NEAR HILL NORTHERN HOTEL CO., PROP. FRANK L. CRAMPTON, MGR. RATES \$1.00 PER DAY AND UP

ship to Utah to prevent our whole people starving. Some things are as bad as war.—Goodwin Weekly.

"No fellow tells a girl he is unworthy of her if he has any suspicion she is going to agree with him."



## LIVE STOCK

### HANDLING THE PREGNANT MARE AND THE FOAL

As a general rule the handling of the pregnant mare will not differ materially from that of the unpregnant animal. Practices of feeding or handling which are dangerous to one may also be dangerous to the health of the other. It is best to allow the mare to perform her usual work until within a few days of foaling time, but in the later part of the period of pregnancy prevent straining while working and take especial care to prevent the feeding of mouldy or musty hay or grain. Both these factors may endanger the life of the fetus and the mother by causing abortion.

Where weather conditions permit it is best to allow the mare to give birth in the pasture; but, be sure the pasture does not include the barn yard. The next best place is a large well constructed box stall, well bedded with bright straw. In regions where navel ill is, frequent it would be policy to thoroughly disinfect the walls and floor of the stall and the external genital organs, the udder, the tail and the hind quarters of the mare a few days before birth time. It is well to cut the mare's ration to one-half for a few days before and after birth.

In preventing navel ill in addition to the above some advocate the application of powders, others of liquids to the navel shortly after birth. In either case the agents are both disinfectant and somewhat astringent. Before applying either there are two precautions that are necessary, 1st. Be sure and disinfect your hands before handling the navel. 2nd. Squeeze the jelly from the cord as it is a favorable media for bacterial growth. A good powder consists of equal parts of powdered alum, camphor and starch. Tincture of iodine is a good liquid but it is best first to smear the skin around the navel with some neutral fat. Ligating the navel cord is liable to be followed by serious consequences if especial care in the use of aseptic materials, in disinfection, and the above precautions are not followed. It is an unsafe practice for the farmer. Infection in navel ill gains entrance to the cord before the latter has dried, usually during the first day after birth. From the navel the infection is carried to the joints, liver, lungs, or other parts of the body by the blood streams, producing secondary abscesses. Symptoms from the latter may appear in from a few days to a month after the navel is infected. The chances of recovery are best when the symptoms do not appear until the foal is several weeks old. The mortality is about fifty per cent. Treatment is both surgical and medicinal.

Scours is a common trouble that often proves fatal in young and weak colts. There are several possible causes of this condition, as digestive troubles of the mother, an over abundant secretion of milk, and allowing the colt to suckle the mare while she is warm. The treatment for this consists of giving a purgative, e. g. one to two ounces of castor oil, to remove the irritating matter. It is advisable also to give an antiseptic and soothing agent. A teaspoonful of a mixture of one part of salol to

two parts of bismuth subnitrate with half an ounce of browned flour will serve this purpose. The white of an egg is also good. Treatment to be successful must be started early while the colt is yet strong.—Dr. A. R. Haner, Idaho, A. C.

### WEANING THE FOAL

If the foal has been properly cared for during the summer months, being fed a little grain in addition to the roughage and dam's milk, weaning time will be merely a matter of separation.

The time of weaning will vary with conditions, but the best rule is to allow it five to seven months as the work of the mare varies from heavy to light, but if possible don't wean the foal before four months.

The important stage of the youngster's life is now at hand. Separation from the dam must be complete to be satisfactory, and the colt kept in a small lot fenced either with boards or poles. While all colts may not run into the wire, the one that tangles itself in the wire is invariably the most valuable.

The weaning that is most successfully accomplished is the one through which the colt suffers the least setback in growth. If at weaning time the colt can eat its full allowance of grain, 2 to 3 pounds of oats or 1½ pounds of oats and 2 pounds of ground barley mixed together, with plenty of clean alfalfa or timothy hay, it will continue growing and cease to fret for its dam.

Weaning time is the best time to gentle the youngsters. Catch them handle carefully, halter them and teach them to lead. Also inspect their feet and gentle them in regard to handling the feet. If colts are carefully handled a few times each day for several days, it will greatly simplify the breaking later on.—R. Bentley, Colorado A. C.

### THE EFFECT OF BAD DRIVING

There is no more painful evidence of inefficiency than that of an unintelligent man driving a knowing horse. The spectacle of an untrained driver taking 15 minutes to back a trained horse into a narrow driveway is too common to attract the notice of the casual passerby but it is a tragedy to lovers of horses and to people of ordinary business sense.

A nervousness and confusion of the mismanaged horse increase the impatience and wrath of the driver. And the owner and the employer lose by both.

As the price of gasoline goes up, and as the military demand for horses increases, conserving these valuable animals becomes an important economy.

It is painful to make expediency a cure for cruelty to animals, but most owners of horses know how a horse should be driven, and those who take care that they are properly driven are saving money just now.—Exchange.

Dusty hay should not be fed immediately before milking, nor should the cows be bedded at this time, as either of these operations will cause a circulation of dust in the stable which will affect the cleanliness of the milk.

least a fighting chance with this filthy scourge of the human race. Preparedness means success in such a campaign.

### EVERY JUNK PILE

Tells a story—and it is often tragic.

Millions of Dollars worth of farm machinery finds its way into the melting pot, because it was never introduced to good oil and grease.

You are not satisfied with the results you are getting from the castor machine or harvester oil you are now using.

You should KNOW and USE



### Oil and Grease

We guarantee them to last five times as long as any oil or axle grease on the market.

Write for liberal Free sample—Post-paid.

### Guarantee Tire & Rubber Company

427-429 South, Main Street  
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### CALKO DIP

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AN

### INSECTICIDE & DISINFECTANT FOR CATTLE SHEEP HOGS POULTRY AND

To be used for disinfecting barns, chicken coops, corrals, hog pens, out-houses and etc.

One Gallon Calko Dip Makes From 50 to 100 gallons disinfectant. 45c qt.—75c half gal.—\$1.25 gal. Delivered

### Calko Hog Powders

IS A

HOG CONDITIONER AND WORM EXPELLER

Don't feed Worms. Save your Hogs.

—25 lb. sack (delivered) \$2.00  
(parcel post)  
—50 lb. sack (delivered) \$3.50  
(freight)

CALLISTER-KORTH CO.  
McIntyre Bldg., Salt Lake City, Ut.

Mention Utah Farmer when you write.

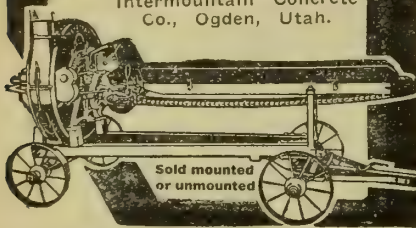
### Be thinking now of next Silo filling

The farmer with a big, broad smile these days, is the one who was ready last fall to bustle his corn into the silo on a minute's notice, and wasn't worrying about getting it there, either, because he had a

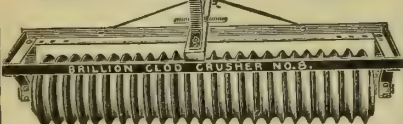
### BLIZZARD Ensilage Cutter

The Blizzard is the tried and true cutter for the farmer. Simple, easy to run, safe. Small engine runs it. Big cutting capacity and unlimited elevating capacity. Self-feed table saves one man. Steady as a clock. Many in use after fourteen and fifteen years. Repair expense very small.

Come in—get a catalog and let's talk over the Blizzard  
Intermountain Concrete Co., Ogden, Utah.



Protects you Against Drouth Write for FREE BOOKLET



### The Original Brillion Will Increase Your Yield 8 to 15 Bushels Per Acre

The original Brillion Clod Crusher protects you against drouth by causing moisture to be retained a few inches below the surface. It crushes, pulverizes, rolls, levels, packs the soil, making a perfect seed bed.

The increased yield will more than pay for it the first year. Write for FREE BOOKLET.

### MOLINE PLOW CO.

Dept. 422 MOLINE, ILL.

### WHITMAN BALER

A Money Maker For You Strongest, Most Durable, Most Economical, and Simplest Baler Made—best work—capacity 10 perfect bales in 5 minutes—exclusive features. Fully guaranteed 50 styles. Harn Horse, Belt and Engine Power. Write for free catalog. Whitman Agricultural Co., 6948 S. Broadway, St. Louis, Mo.

### THE BEST \$45.00 strictly all oak tanned western Double Team Harness



\$36

our new Catalog sent free

Hame tugs, 1½ inch, with three loops and patent buckle. Traces 2½ inches solid single ply, with cockeyes.

THE FRED MUELLER SADDLE & HARNESS CO.,

1413-15-17-19 Laramie St., DENVER, COLO.



EAR PERFECT TAGS Samples Free ATTACHED INSTANTANEOUSLY Name and Address. Numbered if Desired. LEG BANDS for Poultry, Pigeons, Turkeys SALT LAKE STAMP CO. Salt Lake, Utah.



## HIGH TYPE OF CITIZENSHIP FOLLOWS STOCK FARMING

Live stock farming means the raising of profitable animals—animals which pay for their keep and return a profit. Profit producing animals mean pure bred, well bred, carefully selected sires, mated with females of a particular type for a particular purpose. Intelligent feeding, proper care and good management are essentials that must have attention, else selection and breeding do not count. Such problems are difficult ones. They challenge a man's best talent and skill. They make him wide awake, progressive and resourceful. The many business details connected with the industry require a wide knowledge and experience and develop executive ability that makes leaders. Why shouldn't stockmen lead? How many successful stockmen did you ever see who groomed the cows with a milk stool or coaxed the steers to the feeding rack with a "blacksnake," or kicked the lambs out of the way? A real stockman's voice, manners, and actions are kind and gentle. His love of animal life keeps him with his stock, often when he knows that there is nothing lacking to make them comfortable. His animals feel his gentleness and kindness and respond to it. He spreads it in his home and among his neighbors and finds it responded to there. Go into any community where live stock has reached a high state of development and what do you find? Has not citizenship kept pace? Is not the community orderly and well governed? Are not the schools and churches efficient and well supported? Who are the community leaders? The most modern and best governed states are live stock states. The steady decrease of farm population has been viewed with much alarm. Just how far the social disadvantages of country life effect the problem it is hard to say, but it is certain that in stock-raising communities there is less movement from the farms to the towns and cities. Farm animals have an attraction for most boys and girls and the social life in the stock-raising community seems to be stronger knit. The stock breeder's calling is a manly, splendid, and ennobling one. The man who engages in it along the lines he must follow in order to make a success of his undertaking is helping the Creator's work; he is playing well his part; he is feeding his brethren; he is improving the health and strength of his fellow men, adding to the manliness of man and increasing the wealth and prosperity of the world.—Stephen A. Baird.

### CARE OF SOW AND PIGS.

Preparedness at Farrowing Time Is Money Saved—Proper Handling Prevents Losses.

Farmers who intelligently feed and care for their pregnant sows, so as not to overload them with fat, but instead give them feeds for the development of bone and muscle, are on the right road toward the production of strong, healthy litters. Their preparedness program, however, does not end here.

Two weeks before farrowing the sow should be put into a farrowing pen so that she will become acquainted and contented in her new quarters. The farrowing pen should be dry and free from drafts. Provide the pen with a guardrail made of 2 by 4 inch planks set 8 inches from the wall and 8 inches from the floor to prevent the sow from crushing the pigs against the

wall. Use only a small quantity of bedding; leaves or straw are preferable. See that the sow has plenty of fresh water.

It pays to keep the sow quiet. Assistance at the time of farrowing should be at hand if needed, but the sow need not be helped if she is getting along well. In cold weather put the newly born pigs in a well-warmed basket, and after farrowing is over the pigs should be placed with the sow, care being taken that each one gets to a teat. When the afterbirth is passed, it should be removed from the pen at once and burned or buried.

After farrowing, the sow should have nothing but water and a little thin slop for the first day. The feeding for the first three or four days should be light, and the time consumed in getting the sow on full feed should be from a week to 10 days, depending on the condition of the sow and the size and thrift of the litter. It takes plenty of sow's milk to make healthy, growing pigs. If the pigs begin to scour, feed the sow less and give her plenty of strong limewater.

It is very necessary that the little pigs have plenty of exercise and all the sunlight that can be given them. Do not allow the pigs to run out during a cold rain. If possible, provide green feed or roots. These keep the sow healthy and cheapen the ration. Encourage the pigs to eat grain after they are three or four weeks old. Build a creep for them so they can feed alone. At this age feed for bone and muscle. Give them all the skim milk you can. If skim milk is not available give them some meal and plenty of pasture. In about 8 or 10 weeks the pigs will have practically weaned themselves. After they have been successfully weaned the most perplexing job is over.

By putting into practice the essential points above mentioned the number of pigs raised to weaning should be increased. Hogs never fail to respond to good care. Kind treatment always means contentment, with its corresponding profits.

### STOP KILLING CALVES OR WE'LL HAVE NO COWS

Slaughter of Calves is like 'Saving at the Spigot and Losing at the Bung' 'In Argentine there is a law making it a felony to kill any female of the cattle species that is under six years old. Argentine is wiser than we are. The economic mill grinds slowly but it grinds exceedingly small. We are now paying prices which may be considered exorbitant for first class milch cows, for beef and milk. That the killing of three million calves every year for veal and the spaying of thousands of heifers and fattening them for the block, is responsible in a large measure for the present high prices of certain food commodities, there can be no question.

Calves are taken from their mothers immediately after they are born on the pretext that a cow's milk is too valuable for a cow's calf. These calves, in case it happens to be in the vicinity of a large city, are often sold by calf buyers to people in the lower districts for veal. Those that are not sold to calf buyers are raised on skimmed milk and if they do not die of scours they become runty and badly stunted in their growth.

As a general thing this practice is to be condemned. The farmer and



Nothing  
mysterious--  
nothing  
hard to  
understand--

—about electric ranges.

—so easy—so clean—so economical—so cool and comfortable that women everywhere are cooking with electricity.

—just think how easy it is to operate a stove that requires only the turning of a switch to secure heat! Think how easy it is to cook with a range that doesn't require constant attention—no excess heat! No smoke. No fumes. And then, too there's no more scouring and scrubbing to keep your cooking utensils clean and free from soot.

—the same current always produces the same temperature—therefore, other things being equal your cooking is uniformly good.

—you'll cook so many things better than you have before; you'll appreciate quickly the ease and economy of operation of your new electric range; you'll like its cleanliness—its coolness—its adaptability—its ABSOLUTE SAFETY.

You are cordially invited  
to Call at Our Store

**Utah Power & Light Company**

"Efficient Public Service."



Two well known brands of Underwear

Made by the  
OGDEN-UTAH KNITTING CO.  
Ogden, Utah.

Get at your local dealer  
If not write us for catalog.

IF YOU WANT

**REAL BARGAINS**

In Dry-Farms Raw or Improved from 80 to 640 acre tracts, write me.

I do not list anything but good, productive lands, that carry with them a price that spells **REAL BARGAINS**—the Best Values in the State.

**J. W. PAXMAN**

Nephi

Utah

tine to help us out in our food supply. This is indeed a serious economic problem.—Geo. H. Glover, Colorado A. C.

When you answer advertisements, tell them you saw it in Utah Farmer.

dairyman are saving at the spigot and wasting at the bung. They must now pay \$75 for a good cow and have none to sell. Every time we sit down to the dinner table we are paying the price for this short-sighted policy. One thing is sure, if we kill all our calves it is only a question of time until we will have no cows. The farmer and dairyman, in their greed, have not been willing to wait for their money, but have grasped at the dollar which is in sight, and as a result we are on the verge of a cattle famine. We are now looking towards Argen-





For Greatest Satisfaction Use  
**DOUBLE SERVICE**  
**Automobile Tires**  
Guaranteed 7,000 Miles Service  
**Absolutely Punctureproof**

Double Service Tires are made double the thickness of the best standard make tires.

This 100% greater wearing surface naturally gives that much more mileage and service. The average of 12 miles of tough

fabric and one inch surface tread rubber makes these tires absolutely punctureproof.

These tires excel all others for use in the country over rough and rugged roads as well as on hard pavements. They are as easy riding and resilient as any other pneumatic tire—the air space and pressure being the same.

They are the most economical and "care free" tires made and are used where tires must be depended on and tire troubles cannot be tolerated. Many Double Service style tires are in use in the U. S. government and European War service.

Our output is limited to a certain amount, but for a short time we offer the following reduced special prices as an introductory offer:

**PRICES**

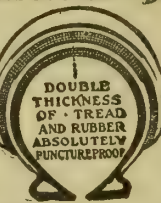
Tires Tubes		Tires Tubes	
30x3 in.	\$8.60 \$2.30	38x4 in.	\$17.45 \$4.65
30x3 1/2 in.	10.85 3.10	38x4 1/2 in.	21.20 5.60
32x3 1/2 in.	12.75 3.20	36x4 1/2 in.	22.50 5.75
33x4 in.	15.75 4.20	37x4 1/2 in.	23.60 6.20
34x4 in.	16.70 4.35	37x5 in.	26.30 6.50

All other sizes not included in above list also furnished. Non-skids at 10% additional.

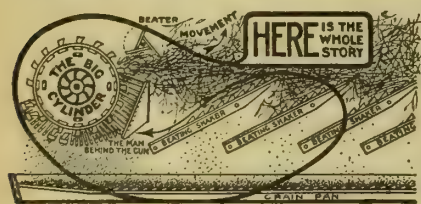
Terms: Payment with order at above special prices, a 10% discount allowed on orders for two or more tires. All personal checks must be certified.

Try these tires now and be convinced of their very high qualities. Sold direct to the consumer and European War service. Descriptive folder upon request. Write for it.

Double Service Tire & Rubber Co., Akron, O. Dept.



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**Works for You**  
**It Is Guaranteed**

"With proper management to be capable of doing more and better work than any other machine made of like size and proportions, working under the same conditions and on the same job."

It is so written in your purchasing contract. This clause has stood for years and years in the selfsame words. We believe them ourselves and we back them up with the machine that we build.

## WHO WANTS LESS?

You can easily find out what this guaranty means by sending for a copy of the Home Edition of the Red River Special paper. Your own neighbors who understand have furnished the facts for this number. Ask for a Big Catalog, too. Both free. A postal request will do. Just sign your name and address.

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(In Continuous Business Since 1848)

**BUILDERS EXCLUSIVELY OF**  
**THRESHING MACHINERY**

Red River Special Threshers, Feeders, Wind Stackers  
Steam and Oil-Gas Tractor Engines

(20) **BATTLE CREEK, MICHIGAN**

Do not wait until you have used the last Butter Wrapper before ordering more, because it takes time to print them.

## HOME

### THE WELL-SPRING OF LIFE ON THE FARM

By C. L. Armstrong.

Water—pure water is above all the most necessary thing in life. Everyone has always recognized the need of pure water for home, farm and stock purposes. But—strange to relate—until very recently the question of whether it was or was not pure was one that apparently concerned few despite the fact that disease and death could be directly traced to the use of impure water.

Farmers in general have too frequently made the mistake of thinking too little of health and well-being of themselves and their families, though they do devote any amount of time and money to prevent weakness and disease among the cattle and even the crops of the farm.

The health of the horses is conserved by ventilating the stables, while the sleeping rooms of the farm house are seldom open. Tests for tuberculosis are given the cattle.

But the family lives in an atmosphere best calculated to give anyone consumption. Every possible measure of prevention against hog cholera is used, while at the same time no one ever gives a care, apparently, that the drinking water is full of impurities and bacteria that leads to epidemics of human diarrhea.

Many people, with an erroneous idea of economy, actually risk the lives of their families, neighbors and themselves by depending on an inadequate water system.

A generation ago, before the country was as thickly settled as it is today, before forests had practically disappeared, many people had reason to depend upon spring water. The old idea was to build a home right near a spring, or close to a creek or river, and use the water that Nature supplied in this way for domestic purposes. If a spring, or creek or river was not handy, a shallow well was dug. These wells were usually from 15 to 25 feet deep and in times past the water secured from a well of this nature was practically pure.

However, the country "grew up." The population increased. There was a natural increase in animal life, live stock, barns. Privy vaults, outbuildings, etc., were built, and sooner or later the soil surrounding the source of water supply, especially the water surrounding the shallow wells, which were usually located close to the house and the barn, or in some other low spot, became contaminated.

It is well for those who are not sure about the source of their water supply to give heed to the following: "Right now, wherever you live, you may be drinking water from a supply which has filth poured into it through one side, while through another it comes out for you to drink. As a result, one disease alone, typhoid needlessly fastens itself on two hundred and fifty thousand American men and women every year, and three hundred and seventy thousand babies less than 5 years old are annually sacrificed to impure water. It is your own fault. You refuse to pay for clean water. That's because you do not know what the stuff is that you drink. We dig a cesspool and well in the same yard, the contents of one seeps through the earth into the other. We place

a privy vault a few feet from our well hole and the rains wash the filth from the former into the latter. Did you ever stand at the edge of a barnyard and watch the rain falling from the roof of the barn or pig pen to the manure pile below, slowly accumulating pools of reddish black and drain away into someone's drinking water? Or have you ever stood by a river bank and watched a sewer belching forth its infinitely more harmful human corruption? The idea of drinking such nauseating stuff is not pleasant, but that is exactly what millions of us are doing."

Anybody having wells can wisely investigate the character of the water that they are taking from that well.

Never under any circumstances, should water be used for domestic purposes that has come from any strata above hard pan. In fact, it is very much safer, to go on through the hard pan and cap rock to the water-bearing rock, or water-bearing sand or gravel beneath the rock strata.

Some people use the pneumatic pressure system, operated from a compressed air tank which is charged by an air compressor operated by a gasoline engine. The great advantage of this system is that the water is not only under constant pressure, but is being pumped continuously as it is used from the bottom of the well, furnishing a cold, fresh supply of water at all times.

Those who have used the ordinary storage or supply tank system will readily recognize the advantages this new system has over the old. They will immediately recognize what an efficient protection against fire this system provides. Either the hand pump, elevated storage tank, or pressure system when supplied from a deep drilled well, obtains the water from the never-failing stratum in the rock or in the gravel beneath the rock, furnishes a pure, wholesome, sparkling water that has been purified and freed from bacteria by filtration through the sands and rocks of the earth and is a much better investment from every point of view than any other form of supply.

Another thing to be remembered is that practically everywhere it is possible to obtain a pure and wholesome supply of water by means of the drilled well. Even out in our great desert lands, that only a few years ago were merely the abiding places of the coyotes and were considered hopeless as farm lands, irrigation through drilled wells is proving remarkably successful and the soil that was once as dry as a bone is today the most fertile soil in all America. Right out in these deserts artesian or flowing wells are often found. The depths at which these pure and unfailing supplies of water are found vary in different localities, but it is apparent that Nature has, practically everywhere, provided us with an ample supply which we should take advantage of. The only way to take advantage of it is to drill a well.

The sooner you drill a well the safer will be your health and the health of your family and that of your neighbors. Don't be content with a shallow well. Drill down to the inexhaustible pure water. Then, you will have a well that will never go dry when you need it most. You will have a well that will be a well-spring of well-being for your family and yourself.

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KILLS 4 RATS FOR 1 CENT

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placed anywhere, attracts and kills all flies. Neat, clean, ornamental, convenient, cheap. Lasts all season. Can't spill or tip over, will not soil or injure anything. Guaranteed effective. Of all dealers or sent prepaid for 20c. HAROLD SOMERS 150 De Kalb Ave. Brooklyn, N. Y.

## Cut the Cost



## Of Ditching

Drainage and irrigation ditches are easily made and cleaned out with this improved light draft ditching machine. Makes V-shaped ditch with a slope of 45 degrees—sides won't cave in. Unequaled for hill-side work, road grading, terracing, building levees and borders. Reversible—easy to operate.

**All Steel, Simple, Practical**

Now wheels or levers to break or get out of fix. Lasts a lifetime. Quickly pays for itself. Price only one-fifth of big clumsy machines—does same work. Thousands of satisfied users throughout the United States.

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My 250-page free catalog tells you why I sell direct to user, at whole sale, these and other implements, built in my own factories at Waterloo, at prices one-third to one-half less than you usually pay for first-class goods. All sizes, styles and prices of separators, engines and spreaders. My Farmhouse (tractor) has no equal for simplicity and efficiency. State what you need. 250,000 customers testify to quality of the Galloway line of goods. Write today for your free copy of this wonderful book of bargains for farm and household.

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Engines \$26.75 up

Mention Utah Farmer when you write.



## RELIABLE FARM BARGAINS.

We have an excellent bargain to offer this week in 113 acres within 80 rods of the City limits of Garland. The man who owns this property lives out of the State, and has instructed us to sell it at \$120.00 per acre, on easy terms. The land on all four sides of this property is valued at from \$175 to \$200 per acre.

Eighty acres at Clifton, in the north-west part of Cache Valley, with a 7-room brick house, barns and other out-buildings, water right, first class spring for domestic purposes, fine range for cattle at the ridiculously low price of \$63.00 per acre.

One of the oldest and what we consider one of the best farms at Farmington on the Bamberger Car Line. Can reach the City in thirty minutes. This property consists of fifty-nine acres, with a 7-room brick house, big fine barn, an individual spring piped to the house and on the main state road. An ideal place for a country home, or for a man who desire a nice farm close in. This property is for sale at \$11,000, and we will consider taking half Salt Lake property.

One of the best country home sites there is in the State. This place consists of a thoroughly modern 9-room house with big, fine trees also has a large grove of beautiful oak trees in their natural state, fish ponds, beautiful meadows, for sale at a bargain.

If you are looking for one or two acres right near the City, for truck gardening and chicken raising, we can sell it to you on very easy terms. 10 per cent down and good terms on the balance.

We exchange farms for city homes.

Phone Wasatch 963.

KIMBALL & RICHARDS,  
"Land Merchants."

56-58 Main St., Salt Lake City, Utah.

## Are You Convinced Yet?

Are you one of the few who still believe foreign sugar is better than domestic? The fact that the world's leading chemists, have analysed Utah-Idaho Sugar, and proclaim it the equal of any in the world should convince you of its quality.

It is endorsed by the leading cooking and baking authorities; it has been used in public demonstrations to prove its excellence for making good preserves, jellies, pastry and confections. Never yet, has Utah-Idaho Sugar failed to "make good."

Call your grocer for a sack today. We know you will be well pleased. But, be sure you get—

**UTAH-IDAHO SUGAR**  
ABSOLUTELY PURE

## CLEAN UP.

"Picking up the cans and papers on clean up day isn't enough. Every barn, corral and outhouse in the community should be cleaned," says Miss Gertrude McCheyne of the Utah Agricultural College. "Neither is one day in the year enough, but a few minutes every day should be allotted to clean up work. The main excuse for not keeping clean is lack of time. But clean premises are cheaper, more satisfactory, and less painful than a funeral, and many deaths are contracted from germs that have thrived in the unclean places of the house, yard, and outbuildings.

The death rate of infants increases, says Dr. E. G. Titus of the Utah Agricultural College, from 35 in January to from 170 to 176 in August and September. This rise is proportional to the increase in flies during their breeding season. It is significant that the maximum death rate is reached at the time that the flies are the thickest. The fly is a carrier of death. It is hatched in the filth of the outhouses, stables and yards. Clean up. Get rid of the fly and save precious lives.

The work of a few who clean up is undone if others fail to do it. It is everybody's business and problem. Clean up yourself and see that your neighbor does likewise.

### WHITEWASH A FIRST RATE DISINFECTANT.

"Whitewash is one of the best disinfectants for damp, dark places."

"The best way to apply whitewash is, first, to have it perfectly free from lumps, and then use a spray pump.

"Thoroughness is important in all kinds of disinfecting work. It is of no use to disinfect the walls of a barn unless you also disinfect the floors and mangers.

"One good point about whitewash is that its color tells you when you have thoroughly covered a surface.

"Some of the coal-tar disinfectants not only destroy germs but also kill lice, fleas, parasites and, in addition, heal cuts and wounds.

"The best ways to disinfect yards, such as after a hog-cholera epidemic, are: First rake up all the trash and burn it. Then cover the yard three inches deep with straw and burn that. If you are not able to secure straw, sprinkling the ground with lime is a second choice. To disinfect posts and fences, whitewash or paint them.

"Disease germs shorten the average span of life by about two years. About 90 per cent of the common diseases are infectious, or 'catching.' Disinfection after disease is the first step for healthfulness, both for persons and live stock."—Farm and Fireside.

## THE WOMAN DEMONSTRATOR

Weber County has just sent in a petition to the Utah Agricultural College signed by three hundred names asking for a home demonstrator. Don't you want one in your county? So far the state has only two but in one short year of service they have accomplished wonders, most wonderful of all is the fact that they have been royally welcomed into all homes. Beside this they have started clean milk campaigns, co-operative laundries, improved the family diet, encouraged home gardens and have given unlimited baby advice. The time is now ripe for each county to have its own home demonstrators.

## BIG INCOMES FOR WELL DRILLERS

### \$2500.00 to \$10,000.00 Per Year Clear

If you want to get into a big paying business of your own and be your own boss, investigate the exceptional opportunity now offered in the Well Drilling Business. Ten times more work to be done than drillers do it! \$50.00 a day clear profit is what many men are doing with

I clear \$50.00 a day above expenses right along. Thos. Kelly



From Feb. to Dec., 1915, 11 Made \$10,500.00 with One of Your No. 16 Machines. Wm. Gardner

## Armstrong Well Drilling Machinery

We've been building high-grade drilling machinery for nearly half a century. We've learned how to combine simplicity and durability. And we offer equipment that will drill faster and at a lower cost per foot than any other machinery in existence—machinery that is easiest to operate—that runs quietly—eliminates repair bills—that is always on the job. Our patented Internal Compensating Band Wheel Clutch—a feature that saves all lost motion—is one of the greatest improvements ever found on a drilling machine. Besides saving energy and power, it gives absolute control

over drilling motion. This and our Friction Hoist, another great trouble and work saver, give operator an easy right-hand control of entire machine, including raising and lowering the derrick by power. Many other equally striking advantages.

Pay for an Armstrong Drill as it pays for itself on our part cash and time payment plan.

Write Today for our big free catalog. Tells all about Armstrong Drilling Machinery and the Well Drilling Business.

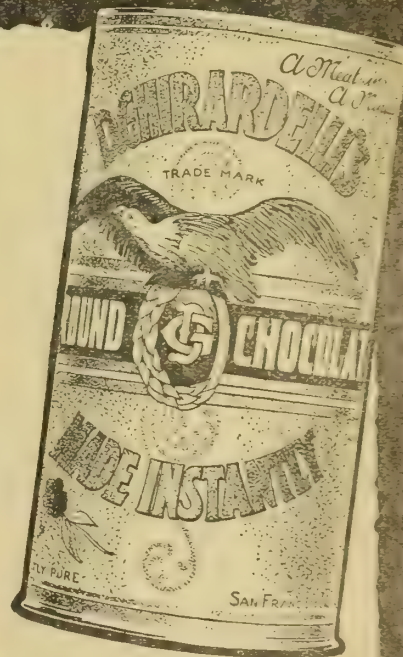
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508 Chestnut Street, Waterloo, Iowa

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## ONE CUP

Ghirardelli's Ground Chocolate in the hermetically sealed can is the best and the most economical chocolate you can buy. A tablespoon of Ghirardelli's, a cent's worth, makes a cup of the most delicious beverage you ever drank. Insist upon



## GHIRARDELLI'S GROUND CHOCOLATE

In ½-lb., 1-lb. and 3-lb. hermetically sealed cans. There's double economy in buying the 3-lb. can.

Since 1852

D. GHIRARDELLI CO.

San Francisco

When you answer advertisements, tell them you saw it in Utah Farmer.



## Questions and Answers

Richfield, Utah.

Utah Farmer:

Dear Sir:—What is the value of water to other feeds for milch cows, cattle, and horses?

A Subscriber.

Answered by Dr. W. E. Carroll.

Water is absolutely essential to the life of all plants and animals. There is no possible way of placing a value on it in comparison with other feeds, as there is no other substance containing a large quantity of water. Any rations can be replaced by other feeds without interfering with the functions of the animal.

Preston, Nev.

Utah Farmer:

Will you kindly answer through the columns of your paper, a good way to rid cabbage of lice.

D. T. N.

Answered by Dr. E. G. Titus.

Cabbage lice can best be handled by spraying with a tobacco dip or a kerosene emulsion. If there is plenty of water pressure convenient, cold water used early and driven thoroughly on the upper and under sides of the leaves will aid very materially in the control.

Sunnydale, Ida.

Utah Farmer:

Answer through the columns of your paper, a way to rid a frame house of bedbugs?

Respectfully,

B. W.

Answered by Dr. E. G. Titus.

The best method to rid a house of bedbugs is to fumigate the house with hydrocyanic acid gas. This should be done, however, by someone who is familiar with the use of this very poisonous gas. Where single rooms need

THE CHANCES ARE YOU WOULD buy an automobile if you got a bargain for your money, wouldn't you, Mr. Man? Of course you would. Another thing, you would buy quicker if you knew whom you were dealing with. Below are bargains in our Used Cars that are in first-class mechanical condition and ready for immediate use. Remember, we stand back of these cars. Now, if you are really looking for a bargain, come down and see us, ask for our Mr. Cherry, Mgr. Used Car Department, who will be glad to demonstrate or answer any questions in regard to these cars. Liberal terms to responsible parties:

Buick, D 45, light six 5 pass, e. and s.  
Buick, C 25, 25 hp., 1915, 5 pass, e. and s.  
Buick, B 25, 25hp., 1914, 5 pass, e. and s.

Buick, C 36, Roadster, 35 hp., e. and s.  
Reo, 1910, E, 5-pass.  
Overland, 1913, 5-pass.  
Overland, 1914, e. and s., 5-pass.  
Paige, 5-pass., e. and s.  
Paige, 5-pass., e. and s.  
Paige roadster, 5-pass., e. and s.  
Studebaker, 1913, e. and s., 7-pass.  
Velve, 1914, e. and s., 5-pass.  
Chalmers, 1910, 5-pass.  
Stoddard, 1912, 5-pass.  
Wiley 1-ton truck.  
Cadillac, 1914, 7- pass.  
Cadillac, 1913, 5-pass.  
Cadillac, 1911, 5-pass.  
Franklin, 1912, 7-pass.  
Oakland 1910, 5-pass.

RANDALL- DODD AUTO CO.,  
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Correspondence given prompt attention.

Excursion Rates on account of Celebration, opening Strawberry Valley Project at Payson, Utah.

Excursion tickets via Salt Lake Route will be on sale at Salt Lake City, and intermediate points to, and including Delta. May 26th and 27th. Tickets will be good for return passage until May 28th.

to be cleared from bedbugs, it can best be done by the use of gasoline or benzene applied with a feather to all the cracks and crevices in the walls, ceiling, and floor. If the room is papered, the paper should be removed and the walls thoroughly cleaned. Beds and other furniture should be taken out and aired, and after the room is thoroughly cleaned use gasoline or benzene.

### SUGAR BEET SEED GIVE PROFITS OF \$130 AN ACRE.

The Experiment Station of the Utah Agricultural College is in receipt of a check from the Amalgamated Sugar Co. for two hundred ninety two dollars and sixty cents for 2090 pounds of beet seed raised last year on one and one third acres of ground at the College farm at Greenville.

The cost of production including \$-rent per acre were \$95. The profits per acre after all costs of production were paid was \$130.

This is the fourth year that commercial seed has been grown on the college farm successfully, and at a profit which proves that the possibilities of making it an important industry in our state are very good.

### MEASURE IRRIGATION WATER

The irrigator should have a working knowledge of the measurement of water in order to provide the right capacity of pump or proper sized lateral for the acreage in question. He should learn how much water is used by each field and crop in order to determine the water requirements of different crops and the most economical use of water. The water is often worth several times as much as the land to which it is applied and the irrigator should measure the water in order to determine whether he is getting the quantity he is entitled to. The data thus gathered would be valuable in making a equitable allotment of the water of any community. If every irrigator would install a measuring device in his head ditch and learn to measure the water accurately so he could tell when he was getting the amount of water due him, there would be less contention in irrigated districts.—W. L. Powers, O. A. C.

### CONVENIENT DEVICE FOR FILLING AND EMPTYING WELL BUCKET.

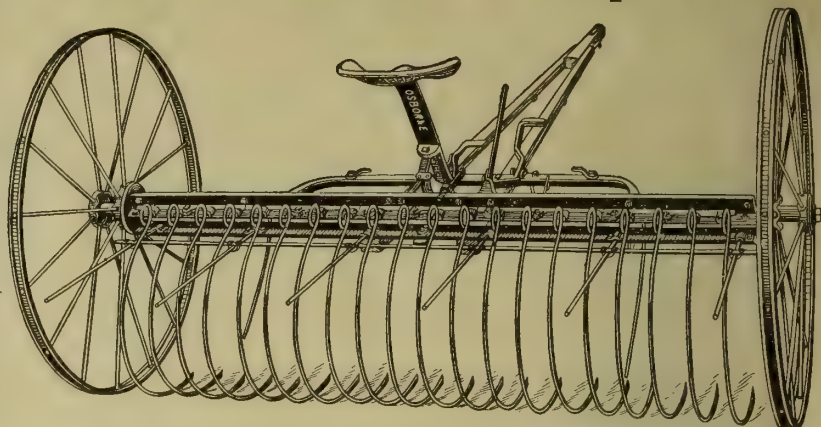
Take an ordinary wooden well bucket, bore inch hole in the center of the bottom. On the inside of the bucket nail a leather flap a little larger than the hole, so that when the leather flap lies flat it will cover the hole. Nail it in such a way that one side of the flap will lift up.

In the center of the water spout into which the water from the bucket is to be poured and which should be wide enough to admit the bucket to stand upright, place a peg two inches high and half an inch in diameter, in an upright position.

To fill the bucket simply lower it into the well. The weight of the bucket will push up the flap and allow the water to enter until the bucket is filled. In raising the bucket out of the well, the weight of the water will hold the leather flap down so as to prevent the water from escaping.

To empty the bucket simply set the bucket in the spout in an upright position so that the upright peg will push up the leather flap and allow the water to escape.

## New Osborne Self Dump Rakes



This rake is all steel except shafts. It has heavy reversible mountain wheels with roller bearings. The dump rods are reversible giving four times the wear on these parts. The rake head never sags. It is easy on the horses and easy on the driver. The teeth are long and oil tempered and pick up and carry the load. Patent whiffletress equalize the draft and there is no chafing or bruising of horses shoulders.

FOR SALE BY

**Utah Implement Vehicle Company**  
SALT LAKE CITY, UTAH.

Headquarters for Osborne Mowers, Rakes, Binders and Champion Headers.

WE WANT YOUR BUSINESS

## Grade Up Your Dairy Herd

By buying **THE BEST BRED BULL IN UTAH** from **THE BEST COW IN UTAH**.

Our county agent tested over 100 cows and this was his best giving:

**8,782 POUNDS MILK**  
**447 POUNDS FAT**  
**AND 5.1 WAS HER TEST.**

She also made **\$85.00 NET PROFIT** for her **OWNER IN TEN MONTHS** from milk alone. Entire pedigree of this great yearling bull is filled with the best butter tests that can be found in the east.

**PRICE WITHIN REACH OF EVERY UTAH FARMER**

Write for price and photo of dam to

**EDWIN BRICKERT**

Beaver

Utah

### WATCH YOUR HORSES' NECKS

This is one of the heaviest work seasons on horses and much care should be exercised in caring for them. Their necks are often soft when the spring work begins and if the collar doesn't fit well or is dirty or hard, sore shoulders often result.

A full leather collar is better than a canvas one. If the horses neck gets smaller with work or loss of flesh provide a smaller collar.

Wash the inside of your collars each evening. If they get hard apply a little harness oil. This renders the leather soft and adds to the life of the collar.

Collar pads seldom if ever cure or prevent sore shoulders and the advisability of their use is questionable. If

### SPRAYING PAYS

Save your fruit trees by spraying. Make them pay the dividends they should. The increase in perfect fruit will more than repay you. The GREEN Sprayer will do the work for you quicker, cheaper and more thoroughly than all the hand sprays. Write for information today. Patronize Utah's new machinery factory.



**GREEN MACHINERY & MFG. CO.,**  
American Building, 338 So. Main St.  
First building north of Post-office.  
Salt Lake City, Utah.

you must use them be sure they are clean; for hard accumulation of dirt has injured many a good horse.



## Ask for Prices On This Hay, Alfalfa — (and Clover Fork Agents Wanted



### The National Giant 4-Point Hay Fork

The only fork which successfully handles alfalfa, hay, straw, blue-grass, red-top and other short, brittle "slippery" crops. Takes big bundles without spilling—unloads in less than half time—saves its price in a day's work. Don't wait. Send for full information now. Mention your dealer's name. Address

PORTABLE ELEVATOR MFG. CO.,  
888 East Grove Street, Bloomington, Ill.

## The Salt Lake Cabinet and Fixture Co., Inc.

Write for prices on

Bank, Office and Store Fixtures

Fine Cabinet Work

32 Richards Street

Salt Lake City

## VICO Automobile OIL



YOU will save yourself many "get out and get unders" if you pay proper attention to the lubrication of your auto. The way to do this is to use "VICO." Made in three consistencies, so as to meet the requirements of the lightest automobile as well as the heaviest truck. Our free booklet tells you which consistency of "VICO" to use in your car. Phone, call or write for it. "VICO" makes good at all temperatures.

Utah Oil Refining Co.  
Refiners  
Salt Lake

"EVERY  
DROP  
COUNTS"

## IMPORTANCE OF CLEANLINESS AROUND THE DAIRY.

(Continued from Page 5)

should be practiced in the care and handling of the milk after it leaves the udder of the cow. Milking out of doors is to be especially commended, and should be practiced where and when possible. Cows should not be fed hay or other dry fodder during the milking period, but rather immediately after.

Feeding the cows dry feed is sure to fill the air with dust and dirt, and experiment has shown that milk contains a larger number of bacteria where the cows are fed dry feeds, during, or immediately preceding milking. It is much better to feed immediately after milking, as then the bacteria laden dust will have a chance to settle before the next milking time. This practice will result in a cleaner milk, and hence a lower bacterial content.

**CLEANLINESS OF COW:**—If a clean and pure milk is to be obtained, it is absolutely necessary to give much attention to the cleaning and grooming of the dairy cattle. The more successful dairymen are giving much attention to the grooming of the cows, and in numerous instances the cleanliness of cows is given as much attention as that of the horse. This is absolutely necessary if a proper milk supply is to be obtained and maintained. Where cattle are confined to stables some manure is bound to adhere to the flanks and tail, and where the hair is particularly long and coarse the character of the milk is bound to suffer if much attention is not given to the cleanliness of the cow before milking time. The hair of the udders, flank and tail of the cow should be clipped occasionally and she should be groomed at least once each day. Cows should not be allowed to wade through mud or manure. Many barnyards are filthy and unfit for cattle to run in, simply because they are not properly drained and kept clean. The manure should never be allowed to accumulate in the barnyard, but should be dumped into a spreader and drawn to the field and spread. This practice saves much time and labor and insures greater fertilizing efficiency. A clean dry barnyard for the dairy-cattle to exercise in will contribute much to the cleanliness and health of the cows, and hence influence the purity of the milk.

**DAIRY UTENSILS:**—Perhaps more than any other source, dairy utensils affect the bacterial content of milk. It is self-evident, therefore, that dairy utensils should receive the greatest of consideration and care, yet how often we find milkpails, strainers, coolers, milk cans, cream separators, etc., that have never been properly cleaned and sterilized. To properly care for dairy utensils is no ordinary or easy task, and it is practically useless to attempt to clean milk pails, strainers, etc., with cold or even warm water. All milk vessels should be made of good metal, with a perfectly smooth surface.

All milk utensils should be rinsed as soon as they are emptied with cold water. If milk is allowed to dry upon them, it makes it very hard to clean them afterward. If they are rinsed as soon as they are emptied, the cleaning is made much easier. After rinsing they should be cleaned



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Grows.

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Louden Hay Tools are as near perfection as forty-nine years of study and experience can make them. You will do yourself an injustice if you do not investigate the Loudon line before buying.

A postal will bring you our complete catalog. Write for it.

The Loudon line includes:

- Steel Stalls and Stanchions.
- Steel Animal Pens.
- Litter and Feed Carriers.
- Hay Tools.
- Barn and Garage Door Hangers.
- Power Hoists.
- Horse Barn Fittings.
- "Everything for the Barn."

**MILLER-CAHOON CO.,** Murray, Utah.  
Idaho Falls, Idaho.



by using warm water with a good washing soda and brush, not a cloth. Then rinse with warmer water, after which use plenty of boiling water, or preferably live steam for sterilization purposes.

Where milk is being delivered to a large dairy or creamery the cans should be cleaned and sterilized before being returned to the farmers.

**COOLING MILK:**—It is not enough that we use every precaution to guard the milk against undue infection, but it must also be protected against contamination and deterioration, therefore, the next most important step toward its safe-guarding is to properly cool it immediately after it is drawn from the cow. Cooling the milk to a temperature of 50 degrees Fahr, or below retards the action and growth of the bacteria that have found their way into the milk, and if the milk is held uniformly at this low temperature it will keep sweet for a very long period.

Milk produced under sanitary conditions, properly cooled and kept clean and cool will remain sweet for an indefinite period.

Moral—Be clean—keep cool.

### SANITARY MILKING APRON.

Dirt may fall from the clothes of the milker into the milk pail even after the cow has been curried and her flank and udder have been carefully washed. To avoid this use a sanitary milk apron.

The apron is a piece of coarse canvas that can be easily washed and kept clean. It is held up by a loop that hangs around the neck. The apron instead of being in one piece is slit up the center about 2-3 of the way to fit each leg and is tied at the knee

and ankles with strings. This simple device keeps the clothes clean and prevents dirt from falling into the milk from the usually dirty milking garb worn by the milker.



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VIA LOS ANGELES  
and rail or steamer

\$40.00 TO SAN DIEGO  
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## POULTRY

### KEEP YOUR HENS CONTENTED.

A hungry hen is not a contented hen. I have seen flocks that one would think at first sight were a healthy, energetic bunch, but close observation soon showed they were rather a hungry bunch. Not just a little hungry, but very hungry.

A flock that is fed at any old time is not a contented flock. If the hens are fed at a certain time every day they soon learn when it is, and they will never expect to be fed between times. During the time between feeds they will go about their business with contentment, scratching, dusting, laying, sunning themselves, but never standing around as near the direction the feed comes from as they can get, and clamoring for something to eat, probably eating but little when they get it. They will get the "piecing habit" just the same as children if you teach it to them, and the habit does not make for contentment.

An injudicious method of turning the flock out to graze is another very common cause of discontentment. If you let them out all day one day and keep them shut up the next, you will have a pretty serious case of restlessness the second day. In fact, it will take them a week to get over their unrest and become satisfied with their lot. If you select a certain hour in the evening and let them out regularly at that hour you will have no trouble. In a few days you might go into the lot almost any time in the day and they would never make any attempt to get out, but when that hour arrives you will find them all eagerness, and if you open the door they are coming out or know the reason why.—Farm and Fireside.

### EXPERIMENTS IN INCUBATION.

At the Pennsylvania Station a series of experiments in incubation were conducted from which the following conclusions were drawn:

Under natural conditions eggs not promptly incubated are subject to daily warming by contact with the hen's body which appears to have an important influence on the life and vigor of the embryo chick.

Warming for 60 minutes gives better results than for 30 or 120.

Eggs held for incubation gave better results when laid flat and turned daily.

### SUGAR'S VALUE AS FOOD

Among the chief articles of diet, sugar takes high rank as to the available energy when consumed. Sugar ranks at 98 per cent meat and fish at 87, eggs at 89, dairy products at 93 and vegetables at 95. Sugar that is made in Utah and Idaho is the equal of the most highly refined imported sugar made from cane.

ORDER "TABLE AND PRESERVING" SUGAR

No especial difference due to position was noted in eggs held for less than 16 to 18 days.

In both tests poorest results were secured with eggs placed on end and turned daily, as compared with eggs laid flat, or placed on either end and not turned.

Influence of age of eggs on hatchability varied greatly, presumably due to season or conditions of breeding pen. Washing eggs for hatching materially reduced hatchability.

Eggs placed on end in incubator for first three days of incubation suffered no perceptible injury.

Eggs turned twice daily generally gave better results than those turned once daily.

### CHICKS EAT TOO MUCH.

N. L. Harris, Supt. Kansas A. C.

Plenty of fresh air and exercise for the birds and good judgment on the part of the owner will do much to overcome the prejudice against the incubator chick.

The tendency to consume large quantities of food is probably the cause of the death of more incubator chicks than any other one cause. When first hatched, they possess ravenous appetites and a faculty for eating everything that is injurious. In the natural state they discover their food frequently but in small quantities.

Another cause of disappointment and disaster is a lack of sufficient warmth. The yolk of the egg, which is nature's method of supplying the newly hatched chick with nourishment, is absorbed slowly during the first few days of life. If for any reason the chick becomes chilled, this process of absorption is checked and the yolk sours, causing a condition similar to white diarrhea.

### Provide Fresh Air.

There is little if any danger of keeping the temperature too high under the hover of a properly constructed brooder where there is an opportunity for the chicks to get away from the heat and choose a temperature in keeping with their comfort. Where the fresh air run is not provided, the danger of overheating is probably as great as that of allowing the chick to become chilled.

Few if any brooders are sufficiently ventilated, and because of the rapid respiration of chicks fresh air in large quantities is imperative for their proper development. After the first few weeks very little heat is required except on damp, rainy days. It does no harm for them to get wet provided they have access to a warm compartment where they can quickly dry.

### DON'T MIX.

Poultry of different ages and breeds. Eggs of different sizes, ages and colors.

The market pays from two to eight cents more for eggs of uniform size, color and quality.

Applicant for Position—"I have here a letter of recommendation from my minister."

Head of Firm—"That's very good so far as it goes, but we won't need your services on Sundays. Have you any references from anybody who knows you the other six days of the week?"

He's a stingy man who won't even give you a pleasant look.

## Better Investigate Today

You would buy this bargain if you would investigate it. Buy it because it is a good buy and would make you a first class permanent investment. One that the money is in and will always be worth more than the purchase price.

### NOT ALONE AN INVESTMENT—A HOME SITE

A 50 acre farm that will make a high class farm home for you. The thing you have dreamed and talked about for years.

### SOIL OF EXCEPTIONAL FERTILITY

A rich, black loamy soil that raises excellent crops of Beets, Alfalfa, Grain, Fruit and Garden Truck. Good railroad facilities.

PRIOR WATER RIGHT at \$1.00 per acre per year if used.

Owner has good reasons for selling and is sacrificing this to YOU if you will look into it today. DO IT.

See or write for particulars to

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## Interlocking CEMENT STAVE Silos



### ANDERSON FARM

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12x35 foot silo, 100 ton capacity. A. B. Anderson, writes that his silo is a complete success.

Information about concrete on the farm, including details as to Silo building, will be furnished free. Just sign coupon below and mail it to us.

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**For the Buyer**

This market place offers our subscribers and readers a very good place to advertise. If you have something to sell or want to buy here is the place to tell it. These advertisements are read because they offer bargains, your bargain should be here. Take advantage of this opportunity today.

**For the Seller**

## Gem Herd of Improved Chester White Swine.

This Herd Bred, Raised and Sold. Both Boar and Sow Grand Champions of the World's Fair held at Frisco this last year. Both Sire and Dam, is still in the herd. If such breeding interests you, write for illustrated catalogue. Stock of all ages for sale at all times.

Address

**GEO. H. LAWSHE**
**Falls City Idaho**

## HOLSTEIN BULLS FOR SALE

Sons of Wachussetts Creamelle George the 2nd whos daughters have made from 350 to 500 pounds of butter fat a year just with ordinary care. Wachuettts was 2nd prize aged bull at the State Fair last fall and all of his get were first in their class but one. His dam gave 105 pounds of milk in a day that tested better than 4 per cent. No. 1 Iowana George 3rd a fine 18 months old son of Iowana Colanthe Alberkerk. A high testing heifer from Iowana Farms, Iowa, her dam has a 19 pound record. This young bull was Junior Champion at the State Fair. The first check for \$200 takes him. No. 2 Wachussetts Beauty a 12 month old son of Maudeline Of Beechwood Beauty with a 23 pound butter fat record, milk test 4.6. She is a full cousin to Colantha 4th Johana, \$150 buys this one. Take no chances, get a bull from a proven sire and one that has produced the goods. Offer several others from 6 months to 1 year old from \$75 to \$125 each.

J. W. STUBBS

**Charleston Utah**

## DAY OLD CHICKS

From our own S. C. White Leghorns, selected as layers from stock "bred to lay" for four generations. Eggs for hatching from these and S. C. R. I. Reds. Book orders now. Bates and Sons, Provo, Utah, R. F. D. No. 1—Box 310. Breeders of Airedale Dogs. Write us.

## BOURBON RED TURKEY EGGS

At rate of 3 for a \$1.00 or 10 for \$3.00. Order from this ad.

B. F. ELIASON

**Moroni Utah**

## 4—BEST LAYING STRAINS—4

Rose Comb Rhode Island Reds and White Wyandottes, Single Comb Black Minorcas and White Leghorns. Egg fertility and stock guaranteed. Write your wants. E. C. Blanpied, Box 60, Milford Utah.

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We carry a large stock of the Best Vegetable Parchment Butter Wrappers and Especially Prepared Ink for Printing the same. We furnish them Postage Prepaid at the following Prices money to accompany order.

100	\$ .90
200	\$1.25
500	\$2.00
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Send all orders to  
**THE UTAH FARMER**  
**LEHI, UTAH**

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9 acres between 13th and 14th South, good for dairy or gardening. Can cut into lots later; only \$400 per acre, \$200 cash, balance easy, or might trade.

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**Salt Lake City, Utah.**

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**BABY CHICKS & HATCHING EGGS**  
White Leghorns, Brown Leghorns, Barred Rocks, R. I. Reds, Black Minorcas, Anconas, Buff and White Orphingtons. Prices on application.

**THE ORLAND HATCHERY**
**Orland, Glenn Co. California**

New 5-room brick cottage, and 6 acres of land with small fruit and flowers. Ideal home in edge of Provo Utah. Sale—easy terms, or trade for Utah or Idaho farm land. Address

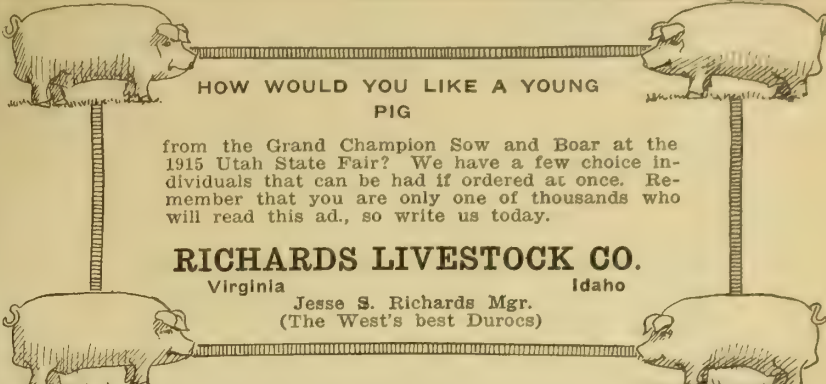
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from the Grand Champion Sow and Boar at the 1915 Utah State Fair? We have a few choice individuals that can be had if ordered at once. Remember that you are only one of thousands who will read this ad., so write us today.

**RICHARDS LIVESTOCK CO.**  
Virginia Idaho  
Jesse S. Richards Mgr.  
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## UTAH HATCHED WHITE LEGHORN BABY CHICKS \$11.00 PER 100

Circulars, order-blanks, etc., upon request. Candee Colony Brooders carried in stock.

**GLENWOOD EGG FARM**
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## Pure Bred Unrelated DUROC JERSEY PIGS FOR SALE

\$5.00 apiece.

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Beautiful, useful and profitable. Best for showing; best for egg-laying; best for table. Largest Wyandotte Farm in Southwest and only complete family of Wyandottes known. Eleven varieties and each from finest strain bred in United States. Write for full particulars. **VILLA WYANDOTTE FARM,** Villa Road Lamanda Park, California.

## FOR SALE

**Registered Duroc Jerseys**

100 fine, youngsters and some fine brood sows.

**PULLUM FARM**
**R. D. Box 40 Trenton, Utah**

As good as new, has not had four months use, a No. 5 Oliver typewriter for sale cheap. Address D-201 East Broadway, Salt Lake City, Utah.

## FOR SALE

Three pure bred registered Percheron mares. Must sell at once. One now in foal. Price for the three \$1,000.00. Write or call on

E. D. HATCH

**Heber Utah**

## DECORATION DAY EXCURSION ON THE SALT LAKE ROUTE.

Excursion tickets will be sold from all Salt Lake Route stations in Utah on May 29th and 30th.

Also to points reached by the Utah Transportation Co., via Milford.

Tickets will be good for return passage until May 31st.

## TRUE TO LIFE.

"Some people are humorous without even knowing it."

"As when, for instance?"

"Here's a man advertising a lecture on 'The Panama Canal,' illustrated with slides."—Chicago Herald.

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## PLANTING POTATOES

The preparation of the seed bed is of greatest importance in raising potatoes. It is best if potatoes follow alfalfa or clover in the system of rotation. As a general rule, the soil should be plowed deep in the fall, allowed to lie rough all winter, disked and harrowed well as early as possible in the spring, then harrowed after every rain until planting time in early May. Some of the best potato growers in the state make a practice of plowing the alfalfa sod in the fall and then plowing again in the spring, after which it is disked and harrowed well until planting time. The best and cheapest way of combating weeds is the preparation of the seed bed and not to wait until the crop has come up.

The average planting date for potatoes in Idaho varies from May 1st to May 20th. The average depth of planting is 4 inches although this varies with the type of soil and the amount of moisture in the soil; being deeper when the soil is dry and sandy.

A small acreage may be planted by plowing out the furrows but, in case a field of considerable size is to be planted a machine planter should be purchased. These are of two types, the self-planter and the two-man planter. The two-man planter is best since it will not spread disease and will give a more even stand. In case the potatoes are planted in plow furrows, they may be covered by cross harrowing. In this case, the furrows should be made more than four inches deep since the harrowing will not completely fill them. The distance apart of the rows and the hills in the row vary from 12 inches by 36 inches to 18 inches by 42 inches, depending upon how much moisture is in the soil or is available and how fertile the soil is. In the dry-farm sections they are often planted farther apart than 18 inches by 42 inches.

Blind cultivation is advisable if the rows can be seen before the plants are up. When the rows cannot be seen, harrowing is an excellent practice and this should be continued until the plants are four inches high.—G. J. Downing, Idaho A. C.



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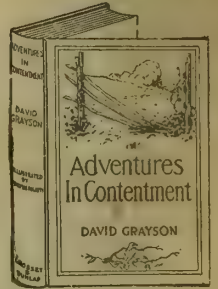
## BAILEY & SONS CO.

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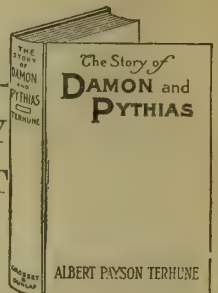
A book exists somewhere of some kind, which they would like to own if they knew about it.



NO MAN IS SO BUSY THAT HE CANNOT FIND TEN MINUTES EVERY DAY TO SPEND WITH A GOOD BOOK.



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You can bet they will if they are

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"NEVER-RIPS" or "MADERITES"

Any man who has worn them once will always buy them.

Don't let your merchant sell you something he claims is just as good.

You might just as well have the best, so when you buy work clothes insist on getting

### SCOWCROFT'S

"NEVER-RIP" OVERALLS

AND

"MADERITE" WORK SHIRTS

They always give satisfaction.

ASK THE MAN  
WHO WEARS THEM

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Is not a chance—it is the result of the expenditure of millions of dollars in money and the working-out of a positive plan of betterments, which has extended over a period of many years—

As a consequence, the Union Pacific System has been brought to a state of operating regularity—the effects of which are felt through every channel of the service; the work goes on from day to day, and the public is assured of the full benefits resulting therefrom—

When you buy transportation, you buy it with the same economic conservatism you would use in purchasing government bonds or other dependable securities—

In traveling, you are entitled to stability—service, and protection, for every dollar you expend—

The Union Pacific System has been termed, "The Standard Road of the West;" it is "standard" in everything the world implies.

Six trains east daily; two trains north and northwest.

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# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region

OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE



VOLUME XII; No. 43

LEHI AND SALT LAKE CITY, UTAH

MAY 27, 1916

COLLECTOR  
READING ROOM

## OUR GRAIN CROPS

We have greatly increased our grain yields during the past two or three years. Dry-farming is responsible for much of this increase.



## THE SHEEP RANGE

Many changes are taking place in the sheep business. The increased price of wool and lambs is partly responsible. If the sheep range is being curtailed, why not raise more sheep on our farms?



## Splicing Wire Rope

By L. R. Humpherys

**Equipment**—Hammer, cold chisel, steel marlinspike, two clamps to untwist rope, wooden mallet and rope twine.

**Instructions**—Unlay the strands of the ends to be spliced for a distance of ten feet. Cut off the cores in the middle and interlock the strands regularly with each other as indicated in Fig. 186. Unwind strand a and follow it with strand a' of the other end that corresponds to it. Cut off all of a except six inches. In following a' be sure to make the twist of

the strand agree with the rest of the rope.

Now unlay strand b of the other end and follow up with b' in the same way as indicated above. Continue this with all the remaining strands until the rope has the appearance of

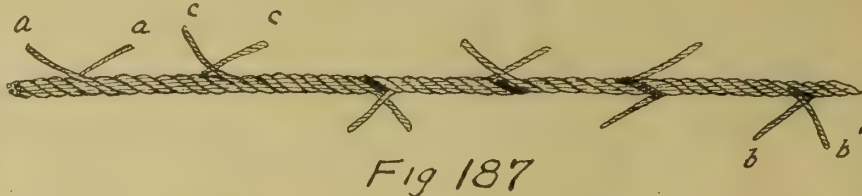


Fig 187

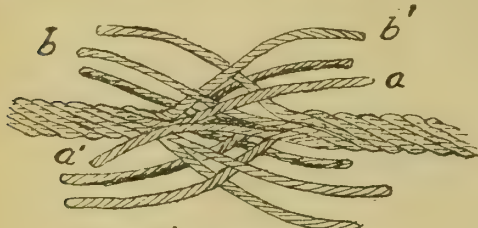


Fig 186



Fig 189

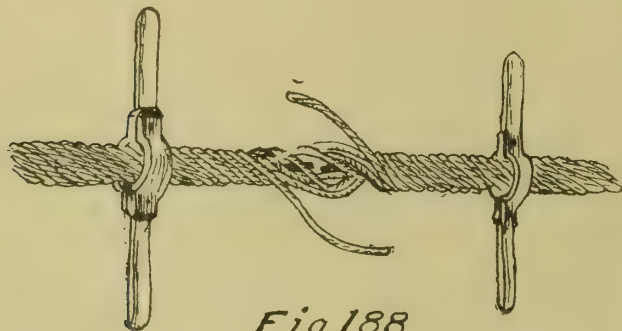


Fig 188

Fig. 187. Place the clamps on the rope as in Fig 188 and untwist the rope by moving the clamps in opposite directions. Cut out about 10 or 12 inches of the core and insert loose ends in its place (Fig. 189). Allow the rope to twist up and straighten. If there are any uneven places they can be reduced by use of the wooden mallet. Repeat this operation with all other loose ends.

### ABOUT THAT WATER PAN.

How often do you clean up the water pans in your hen house? You ought to clean them every day. For a dirty water pan is the surest way of spreading disease throughout your flock.

The best way of handling water in the poultry house is to keep it in a cheap, flat wash basin that can be easily cleaned and refilled. It doesn't pay to bother with patent water tanks. You will have to fill them just as often as the basins, and they are harder to clean up.

Place the open basin on a box some eight or 10 inches high and perhaps 18 inches square, and make a runway for it. This keeps it from filling up with dirt and straw from the floor and the hens do not climb into it in drinking.

Then put the box and basin in a sunny corner of the house away from the roosts and nests, so that no dirt can fall into it from above.

Clean it and refill it with clean, fresh water every day and you will have put the disease germs to flight indefinitely.

### CURE OF BURNS.

Always keep a box of epsom salts handy in the pantry or near the kitchen where you do your cooking. Epsom salts is the most wonderful cure for burns that I have ever used. Not long ago I saved a cook from being disfigured for life. She burned her face badly from hot fat, and I just covered the burn with epsom salts while waiting for the doctor to come. The doctor said he had made a most wonderful discovery, and that I had saved the woman from wearing a scar the rest of her life.—Exchange.

## WHEN THE LIGHTS ARE LIT---

The evenings are not half so long and uninteresting when there is music in the home.

### Why not let the young folks study music?

The happiness that they will bring into the home will more than repay you. The pleasure you will get out of the playing and singing and the good times will banish the cares and worries of every day life.

### Have them Study Piano

The Utah Conservatory of Music is putting out a course of Piano Studies by Prof. J. J. McClellan that is a masterpiece. It carries in it the result of all his experience as a performer and instructor. A wonderful set of lessons from the pen of this stellar performer. **Something that can be understood by everybody.** Just the thing for you, who are far away from the musical centers, and would like the instruction of a Master.

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Templeton Building, Salt Lake City, Utah.  
Gentlemen:—Send free—information regarding the course checked.  
It is understood that I am not obligating myself in any way.

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All of the courses of the Utah Conservatory of Music are by the best artists in their respective lines that can be procured, these courses are endorsed by the leading musical authorities of the West.

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A YEAR.

FOREIGN  
SUBSCRIPTION

\$1.50

VOLUME XII.

LEHI, UTAH, SATURDAY, MAY 27, 1916

No. 43

## Balanced Dairying

An address delivered to Utah State Dairymen's Associations, Logan, Utah, by Fred. W. Merrill, Dairy Expert for The De Laval Separator Company.

It is most gratifying to return to Utah after an absence of five years and meet the Dairymen who are doing their best to place the dairy industry in the front ranks of all agricultural practices in this state. I want to say to you in all earnestness, not because I appear on your program and want to appeal to your appreciation and not that Utah is my home state and I want to say something good about it, but because it is true and cannot be refuted by any one who is acquainted with dairy conditions elsewhere and is a good observer, that Utah offers most exceptional opportunities for the full and complete development of the dairy industry. In fact I think she surpasses most sections, but this entire Rocky Mountain region, with its wonderfully fertile and high producing valleys offers dairy conditions that can not be excelled.

I want to say further that in Utah, Idaho, Colorado, Wyoming and Montana a great agricultural blunder is being made when farmers ship from their farms, their communities and their states those farm crops, alfalfa, oats, barley and other feeds that contribute so much to profitable dairy production. These sections are not favorably located with respect to the markets for farm crops which is argument, safe and sound, for the conversion of farm crops into animal products.

Instead of these states buying dairy products to the extent of hundreds of thousands of dollars annually they ought to be selling them to the same extent. If the dairymen of the middle west can buy your grains and your wonderful alfalfa, ship it over the railroad, long distances with high freight rates and convert it into butter and cheese and make money out of it, it speaks well for the agricultural practice of those sections, but does not argue well for the permanency and profitableness of Rocky Mountain agriculture. Yet this is exactly what is being done. Dairymen in Wisconsin are buying alfalfa hay, oats and barley raised on the farms in the Rocky Mountains. Their good dairy cows convert it into milk and butterfat. Their co-operative creameries convert these products into cheese and butter and the same farmers who sold the raw material buy back the finished article at increased prices. In other words they sold alfalfa hay for \$5.00 per ton and bought butter at \$600.00 per ton and cheese at \$500.00 per ton.

The diversity and quality of your farm crops, the digestibility of them, the large percentage of dry matter which can be utilized by the dairy cow is an argument why she should constitute the market. If I am not mistaken she will pay you more per pound than any market you have found yet, providing, of course, she is the right kind of a cow.

Your abundant supply of some of the best water in the world furnishes another reason why dairying should be emphasized. Your ideal climate the year round eliminates any excuse that might be offered for not dairying.

The intelligence of the farmers assures the breeding and development of high class dairy stock and your unexcelled condition for the development of co-operation in form and in spirit, give to you every reason why

nize that his is an expensive proposition, but the dairy cow fits into the scheme of high priced land and high cost of operations because she is an economic conserver of raw materials and manufactures them into high priced, in constant demand, articles. In truth what system of farming is better adapted to irrigated lands than is dairying? Go where you will in America, in Europe or elsewhere and you will find the highest priced lands, lands which are high priced because of the profit they yield, are the dairy lands, and so as we develop in agriculture and as we begin to conserve and to construct for permanency and for profit we look to the dairy cow.

Often the cry is made, "Dairying will be overdone," but I want to assure you that as long as we consume only one half glass of milk per day per capita and one twelfth of a pound

as a whole, for it adds to general welfare and prosperity of all concerned. The railroad companies ought to be interested because dairying increases transportations. The banker ought to be interested and in many places he is, to the extent that he finances the buying of cows and of building of creameries. The dairy industry keeps money in circulation and enables men to meet their obligations more readily all of which makes banking more easy. The merchant ought to be interested for he is a big factor in the marketing of farm products in every community and the entire community ought to be interested because dairying contributes so much to permanent community building.

Dairying begins with the soil. A fertile soil means good feed for dairy cows, feed suited to their needs and dairymen must know that a well-fed soil will produce a crop, which is better balanced in food nutrients than a poor impoverished one. There is no question but what the quality and feeding value of the crops is determined largely by the soil upon which the crop is grown. This is one reason why your alfalfa is better adapted to dairy cows than alfalfa in more humid sections. Your soils are more fertile, they have not been abused so much, and your drier atmosphere is more conducive to the growing and the curing of a better alfalfa.

In order for dairying to continue we must constantly and unceasingly build up the soil which maintains the industry.

This is in compliance with that fundamental law in agriculture, viz., that plants and animals must subsist on the waste and by-products of the other. The poisonous carbon dioxide breathed out by animals is essential for plant growth, while the life giving oxygen gas liberated by plants is absolutely vital to all animals.

The manure of animals is the surest and sanest product we can use for fertilizer because it simply returns the soil elements again which were taken up by the plants.

The dairy cow preserves the richness of the soil and whenever dairying prevails soils are never depleted of their fertility. With every \$1000 worth of alfalfa sold from the farm \$700 worth of plant food is lost to the farm. In \$1000 worth of wheat, \$250 of fertility is removed. In \$1000 of butter less than \$1.00 worth of plant food is taken out.

(Continued on page 7)



dairying should and must, in the future, take precedence over all forms of agriculture in this Rocky Mountain section.

Because dairying does not supplant other forms of agricultural practice but adds to the efficiency and profitableness of other forms I emphasize its adoption so strongly.

The sugar beet grower will find his best, most constant, friends in the dairy cow. The fruit grower of older fruit sections has learned that she is the best partner he can secure and Utah fruit men will appreciate her value more in the future than they do now. The man on the arid land needs an income every week of the year and the right kind of cow will consume many of the crops grown under arid conditions and convert them into a cash crop for him. The man operating the irrigated lands must recog-

nize that his is an expensive proposition, but the dairy cow fits into the scheme of high priced land and high cost of operations because she is an economic conserver of raw materials and manufactures them into high priced, in constant demand, articles. In truth what system of farming is better adapted to irrigated lands than is dairying? Go where you will in America, in Europe or elsewhere and you will find the highest priced lands, lands which are high priced because of the profit they yield, are the dairy lands, and so as we develop in agriculture and as we begin to conserve and to construct for permanency and for profit we look to the dairy cow.

A balanced system of dairying can obtain when the industry receives the attention of Commercial Agencies, the Railroads, the Bankers, the Business men, the Farmers and the community



## LIVE STOCK

### STOPPING THE LEAKS

#### IN THE HOG BUSINESS

With the present high price of grain it is necessary to make the hog business pay that everything possible be done to stop the wastes. This is one of the seasons of the year when much can be done to stop many of the losses.

The season is at hand when the young pigs will be coming along and everything should be done to save as many of them as possible. This can be helped greatly by proper care of the brood sow just before and during farrowing time. About two weeks before the sow is due to farrow she should be put in a pen that is light and airy and her feed gradually changed to what she is to be fed at farrowing time. One should be very careful in changing the feed at this time as it often very easy to throw a sow off feed and cause serious trouble. Constipation is the bane of hog raisers and should be carefully guarded against at this one time in particular, for should a sow become constipated, at this time there is very apt to be a loss of pigs.

After farrowing the sow should not be fed for about 24 hours unless she show signs of uneasiness. Ordinarily she will not care for a great deal. Plenty of fresh water should be given her at all times but real cold icy water should never be given a sow that has just farrowed. The chill should be removed. A thin slop of shorts and milk is one of the very best feeds just after farrowing.

Another method of stopping the leaks is to have a good light airy pen which the sunshine reaches a good part of the day. It should be provided with a good rail so that the sow will not be able to get the pigs between herself and the wall and mash them. This rail can be made from most any kind of a board or pole so long as it acts as a protection for the pigs. It should be six to eight inches from the wall and a like distance from the floor. Up to farrowing time it costs no more to keep a sow that farrows a large litter than it does one that only farrows half as many.

After the sow has done her part of producing a large healthy litter the one in charge should do everything possible to help her save them. If

the sow is heavy and awkward it is often advisable to keep the pigs away from the sow and return them every two hours to suckle for a few days until they are strong enough to keep out of the dam's way.

Another method of stopping some of the leaks is to have some early pasture to turn on to so as to cut down the amount of high priced grain that has to be fed during the winter months.

Organizing community shipping associations and shipping their own hogs to market is another method of stopping the leaks. In most localities the expense of shipping and selling is less than the buyers' profits. Otherwise there would not be so many buyers in the business as there are. This is a profit that the farmers are entitled to and is within easy reach of them if they so desire.

By watching the business carefully and stopping the small leaks, what would otherwise be a loss can be very often turned to a profit.—O. A. C.

#### FEED ANIMALS BETTER.

Our crops vary in Utah in different parts of the state. They are similar to those of Arizona. Dr. R. H. Williams of the Arizona Experiment Station in discussing this varied condition says:

In the irrigated districts too much roughage containing an excess of protein is grown and fed. Dry farmers grow little protein and the supply of this constituent is usually deficient in the ration. If the dry farmer could exchange some of the grains and fodder for a reasonable amount of alfalfa hay the animals in both dry-farming and irrigated districts would be much better fed.

Livestock require a variety and a reasonable quantity of the various nutrients. Protein must be supplied in the diet of all animals. Foods richest in protein are skim milk, cottonseed meal, legumes such as peas, beans, vetches and alfalfa hay. Cereal grains are distinctly deficient in protein, and if fed to young stock should be combined with some of the above feeds rich in this constituent. Carbohydrates are compounds like sugar and starch. Cereal grains, fodders, silage and straw are rich in this constituent. All animals require a certain amount of protein to repair waste material and provide lean meat required in growth. On the other hand, mature animals that are being fattened will make satisfactory gains on a small supply of protein and large amounts of carbohydrates.

The first consideration in feeding an animal is to decide why you are feeding it. There are three main reasons for feeding livestock. These are for growth, for fattening and for breeding purposes. Animals that are fed a maintenance ration do not return a profit. They should be fed amounts in excess of their maintenance. Growing animals require a well-balanced ration with a liberal supply of protein, as growth is dependent upon this constituent. Animals that are being fattened for market should have a liberal supply of carbohydrates and a reasonable amount of protein. On the other hand, breeding stock does best on

medium amounts of protein and carbohydrates. These nutrients may be secured from many sources and every ranch should raise a sufficient variety to furnish a balanced ration.

In feeding livestock it is important that the feeder should know the special requirements of the animals and how to meet them. He should decide on what feeds to raise at home and produce as large yields as possible. It is a simple matter to plan a ration for any kind of animal from any variety of feeds. This involves the knowledge of what the various feeds cost and what returns could be expected by using them in the ration. The market price of the various feeds is no guide to their value, and each feed should be fed according to its merits in the ration. The ration is important and should be studied by every stockman.

#### WATER FOR LIVE STOCK

By I. D. O'Donnell.

On the subject of live stock there is writing without end. Practically every phase of live-stock feeding and breeding is being presented to the public through the multitude of present-day newspapers, periodicals, and books. The only phase of this big subject which appears to be overlooked at this time is the importance of plenty of good water for live stock.

On averaging our farm animals we find that out of each 100 pounds of live weight, 49 pounds is water. This should indicate to all the important function of water in the well-being of the farm animal.

If an animal is provided with good water in accordance with its natural needs it will, obviously make the best practicable use of the dry feed furnished it. It has been found by practical tests that animals endeavor to maintain a reasonable balance as between the amount of dry feed and the amount of water taken into their bodies. For each 100 pounds of dry feed it is necessary for the animal to have a specified amount of water in order to make the best use of the dry feed. The proportion of water to dry feed varies, of course, with the different animals.

The ideal way is to have plenty of good clean water before the stock at all times. Unfortunately this is impracticable. In the northern States there are the freezing temperatures to contend with. Icy water is not good for stock and it is difficult to keep reasonably warm water before them. When an animal takes ice cold water into its body it is necessary to bring this water to proper body temperature before it can be utilized by the body. This means a sacrifice of warmth and on this account many animals prefer to go thirsty rather than take a proper amount of water when the water is cold. This is particularly true of stock which is not well sheltered. It is worth going to considerable expense and labor to supply stock with reasonably warm water in cold weather. It will enable you to get larger returns from your high priced hay and grain.

An unsatisfactory condition met with in some States is the use of stagnant ponds and reservoirs for watering stock. Stagnant and unclean water is no more fit for live stock than it is fit for people. You need not expect healthy and profitable live stock if you force that stock to

#### CATTLE RANCH BARGAIN

Splendid cattle ranch, 280 acres, plenty of free range, timber and water. All fenced, good buildings. Puts up 150 tons of hay. Located 150 miles from Ogden. Price only \$5500.

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## VICO Automobile OIL



THE right oil, at the right time, in the right place—that's lubrication. Don't run chances of half-lubrication; it is expensive. Get the right consistency of Vico Automobile Oil and stay with it. The perfect action of your car will be proof to you that it is the right oil, and that your crank case should never be refilled with any other kind.

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COUNTS

This big bank may be of service to you.

Large loans are readily made, and for your deposits in this institution you have the protection of over \$6,500,000 resources.

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drink unclean water. When an animal drinks impure water, the impurities must be removed by the digestive organs of the animal before the water can be used to advantage. Don't make filters out of your stock. You would not, of course, put sand in the axle grease you use on your farm wagon, but you are doing something just as unwise when you force your stock to drink unclean water. Impurities in water are to an animal's digestive organs what sand is to the bearings of your farm wagon.

A good-sized book could be written on the subject of water for live stock. Space here will not permit mention of all the important phases of this subject. One caution may well be added, however. Water is a great conveyor of animal diseases. Hog cholera in particular is carried from one farm to another by streams and irrigation ditches. Horse diseases are transmitted through public watering places. Cattle disease are spread through the indiscriminate use of open watering holes. Be sure that your live stock is not exposed to disease in any preventable manner.

#### GRAIN SAVED BY FEEDING-FLOORS

Those who have used feeding-floors for their hogs have found them to be good grain-savers, and concrete feeding-floors are coming into favor.

Such a floor should be 6 inches thick, and, if not laid against the barnyard pavement, should have a curb extending from 12 to 18 inches below the surface of the ground. This will prevent the hogs from rooting under the floor. The floor should slope slightly toward one corner in order to carry off rain, or water used in washing. A rim around the outside edge will prevent grain from being pushed off into the mud.

For feeding-floors concrete should be mixed in the proportion of 1 sack of Portland cement, 2 cubic feet of clean coarse sand, graded up to one-fourth of an inch, and 3 cubic feet of hard durable gravel, or broken stone from one-fourth of an inch to one inch in diameter. Eleven sacks of cement will make enough concrete for 100 square feet of feeding-floor. The concrete should be thoroughly mixed and should contain enough water to make the mass quaky so that the concrete will flatten out of its own weight. It should be tightly tamped, however, then leveled off with a straight edge and finished with a wooden float. The floor may be laid in slabs each 6 feet square, 2 inch lumber being used for forms.

Feeding-floors should be large enough to give each hog 18 square feet of space.

#### COMMUNITY BREEDING

The advantage of having one breed of hogs in the community is now recognized and efforts are being made in various localities to promote local organizations for the purpose of furthering the movement. When a large number of well-bred hogs of the same breed are to be found in one locality, a community organization is possible which will create a new interest in breeding and feeding, and teach the members to take advantage of their opportunities. Many other advantages follow, such as buying breeding stock or feed co-operatively when necessary, advertising stock for sale, and in controlling diseases.

#### KILL HOG LICE AND SAVE PORK

It has been estimated that a 150 pound hog has 92,000 drops of blood. Suppose he is supporting 1,000 lice and each takes one drop of blood per day. What per cent of his blood will be lost daily, and who will pay the bill?

To remove the lice is neither difficult nor expensive. Dipping or spraying with coal-tar compounds is dangerous in winter, but three other treatments are available. These are:

1. Equal parts kerosene and machine oil mixed together and applied with an oil can, brush, or swab.

2. Crude oil (thinned with kerosene, if too thick), applied with a brush or as a spray.

3. Powdered staphisagria dusted on the pigs, or steeped as a tea and applied with a brush or as a spray.

For small bunch the first treatment is the most convenient, but when one has many hogs the crude oil is cheaper. Be sure to apply behind the ears and in both flanks. The lice prefer folds of the skin.

Clean the beds and pens thoroughly, also. If these are thoroughly sprayed with the oil, there should be no further trouble from the lice. If the hogs sleep in straw sheds, one can keep them free from lice by treating them every two weeks. Try it!—R. C. Ashby.

#### MOLDY FEED DANGEROUS.

Horses are very susceptible to mold poison, and great care should be given to their grain feed as the past summer has been very favorable for the development of molds, especially on oats. Some forms of mold acts quickly and in a similar way to ptomaine poisoning—in the human family while others require a considerable period of feeding to develop the symptoms.

#### JUST IN TIME

A young man who last June received his diploma has been looking around successively for a position, for employment and for a job. Entering an office, he asked to see the manager, and while waiting he said to the office boy:

"Do you suppose there is any opening here for a college graduate?"

"Dere will be," was the reply, "if de boss don't raise me salary to three dollars a week by tomorrer night."

#### ONLY THEY WHO

#### KNOW WON'T TELL

The Archbishop had preached a fine sermon on married life and its beauties. Two old Irish women were heard coming out of church commenting on the address.

"Tis a fine sermon his Rivrence would be after giving us," said one to the other.

"It is, indade," was the quick reply, "and I wish I knew as little about the matter as he does."

#### DON'T WORRY!

Health is oftener undermined by worry than by work. Lincoln wisely said that no man ever sank under the burden of the day. It is only when the burden of tomorrow is added, that the load becomes greater than a man can carry. Remember, then, to bear your burden a day at a time and don't worry.

## LOUDEN BIRD PROOF Barn Door Hangers

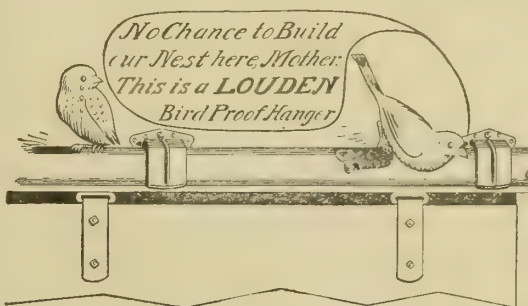
Overcome All The Difficulties To Which Sliding Doors Are Subject.

Doors that sag, stick or bind, are unsatisfactory and expensive. Hinges soon rust and work loose or break. Open tracks are frequently clogged by ice and snow in winter or by trash and birds' nests in summer.

If you expect to build or remodel a barn, or if your door hangers are out of repair, we want to show you the BIRD-PROOF, a completely enclosed track that will solve your door hanger problems for years to come.

The trolleys are thoroughly protected. They can't rust, clog, or jump the track. Hardened steel roller bearings make them roll smoothly and easily. A child can open or close the heaviest door.

The BIRD-PROOF is suitable for barns, garages, outbuildings, factories, ware-houses—any place, in fact, where it is desired to overcome the awkwardness and inconvenience of clumsy swinging doors.



For full description see booklet No. 5.

**Miller-Cahoon  
Co.**

Murray, Utah.  
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## Grade Up Your Dairy Herd

By buying **THE BEST BRED BULL IN UTAH** from **THE BEST COW IN UTAH**.

Our county agent tested over 100 cows and this was his best giving:

**8,782 POUNDS MILK  
447 POUNDS FAT  
AND 5.1 WAS HER TEST.**

She also made **\$85.00 NET PROFIT** for her **OWNER IN TEN MONTHS** from milk alone. Entire pedigree of this great yearling bull is filled with the best butter tests that can be found in the east.

**PRICE WITHIN REACH OF EVERY UTAH FARMER**

Write for price and photo of dam to

**EDWIN BRICKERT**

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Can you think of something that will be more helpful to you than a weekly visit of the Utah Farmer. Brimful of good sound advice, helpful suggestions on every phase of farming and farm life. Over 800 pages of good reading for one dollar. Comes 52 times during the year. Renew your subscription today.

#### HAVE YOU HEARD IT?

Biff—They say the saloons are all closed tight on Sunday in Detroit.

Bang—Well, what of it?

Biff—A friend of mine was driving his Ford only eight miles an hour when a traffic cop jumped out on the rain thoroughfare and arrested him.

Bang—That's strange. What was he arrested for?

Biff—Rushing the can on Sunday.

Excursion Rates on account of Celebration, opening Strawberry Valley Project at Payson, Utah.

Excursion tickets via Salt Lake Route will be on sale at Salt Lake City, and intermediate points to, and including Delta, May 26th and 27th. Tickets will be good for return passage until May 28th.





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New York Office 5th Ave. Bldg.  
S. E. LEITH, Mgr.

Chicago Office Steger Bldg.  
TOM D. COSTELLO, Mgr.

St. Louis Globe-Dem. Bldg.  
C. A. COUR, Mgr.

**Change in Address**—When ordering a change in the address, subscribers should be sure to give their former as well as their present address, otherwise the address cannot be changed. This is a matter of importance to you and to us.

#### OFFICIAL ORGAN

Utah Horticultural Society, Utah State Dairymen's Association, Utah State Bee Keepers' Association, Bear River Valley Farmers' Protective and Commercial Association, Agricultural College Extension Department and Utah State Fair Association, Utah-Idaho Millers' and Grain Dealers' Association, Utah Fruit Growers Association.

#### OUR GUARANTEE

We guarantee every subscriber against loss thru dishonesty or attempted swindle by any advertiser in this publication. We do not attempt, however, to adjust trifling differences between the subscribers and honest responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within thirty days from date of the transaction, and the subscriber must have mentioned Utah Farmer when writing the advertiser.

**Advertising Rates**—The advertising rates will be sent upon application.

Are we taking advantage of the many opportunities for studying and advancement that are given us right here in our own state institutions?

No farmer needs to be without good rearing. There are government bulletins, state bulletins and circulars, experiment station reports and farm papers. Any man who is trying to keep up with modern farming must read part or all of these modern helps. Profit by the experiments the government and states are making. Read one or more good farm papers. There are many ways that a farmer can keep up-to-date. See that your name is on the mailing list to get these helps.

We are glad to know that the United States Supreme Court has taken up the question of dishonest advertising. They have handed down an opinion and now hold that if the article sold does not serve the purpose represented it is a fraud no matter what its value. The case referred to was regarding a land promoting company. A tract of land may be worth all one claims, but if the seller claimed it was for a certain purpose and it would not be possible to make good these claims it would then be classed as a fraud.

"Mere puffing might not be within its meaning (of this, however, no opinion need be expressed), that is, the mere exaggeration of the qualities which the article has, but when a proposed seller goes beyond that, assigns to the article qualities which it does not possess, does not simply magnify in opinion the advantages which

it has, but invents advantages and falsely asserts their existence, he transcends the limits of "puffing" and engages in false representations or pretences.

"When the pretences or representations or promises which execute the deception and fraud are false they become the scheme or artifice which the statute denounces. Especially is this true in the purchase of small tracts for homes."

#### LOCAL PRIDE

Every community should have a certain amount of local pride in some particular thing. It may be a breed of cattle or a kind of fruit on which that pride is centered; but there should be something to bring the people together in a common interest. The community that has nothing of which it can boast is in a bad way and probably will not make any startling advances toward perfection. Why not have each farming community decide on some community hobby and then make an effort to develop something worth while?

#### THE EDUCATED FARMER

Farming is one of the last businesses to be helped by education, but the help is just at present coming very fast. In the old days, when competition in farming was not keen and when facilities for transporting and marketing farm products were poor, most everything had to be used or sold near at home. Then there was very little incentive for extra effort as no difficulty was experienced in raising enough for home use and anything in excess could not be sold to advantage. With modern transportation and marketing facilities, local farm products must compete in the world's market, and the farmer who is not able to meet this competition finds it difficult to make a living. Thus, farming is yearly becoming more complex, and the farmer who would succeed must obtain the necessary training to enable him to meet new conditions. This means that the successful farmers of the future will need to receive special training along agricultural lines. The farmer of the future will be a trained farmer.

#### SELLING AT THE WRONG TIME

One of the most common mistakes made by the farmer is that of selling things at the wrong time. Naturally he cannot be a specialist on marketing, but he should be far sighted enough to know that it is a poor policy to sell things during a slump when everyone else is selling. The same law applies to selling the farm or the crop. After a year or two of poor crops, the farmer is likely to get discouraged and think there is nothing in farming. He wants to sell out at once and is willing to take almost anything. Just at that time everyone else is wanting to sell and the farm must be sold for almost nothing. This is just the time not to sell. Better wait a few years till things get to booming again, then something can be realized in case a sale is made. The lesson is to buy when everyone wants to sell and to sell when everyone wants to buy.

#### WEEDS AGAIN

"We always have the poor with us;" we also have weeds. Wherever farming is practiced, weeds are found and must constantly be fought or they will get the moisture and plant food that are needed by crops. No magic charm is known

by which they can be eradicated, but continual vigilance must be exercised in order to rid the land of these noxious intruders. The campaign must begin early if it is to be effective. After seed is matured and scattered, there is but little use to do anything. The time when work is done most effectively is just as the young plants are coming through the ground. At this time any slight stirring of the soil kills the seedlings. Already many kinds of weeds are going to seed; hence the fight should be taken up in earnest and continued throughout the season. Remember that there is not room enough for weeds and crops on the same land.

#### DEPENDABILITY

To be dependable—to be singled out as one who accomplishes things—is a tremendous asset.

A man may be faithful or industrious, or even capable, and still not be dependable.

For the faithful man may be incompetent, he who is capable may possess erratic tendencies which minimize his efforts, and the industrious man may be a blunderer.

But the dependable man is he who can at all times be depended upon to do that which is set for him to do as it should be done.

He has learned by experience how not to do things, and with this has come naturally the knowledge of how things should be done.

Like every other quality, dependability can be acquired. Like everything else that is desirable, its acquisition requires effort. But the reward is worth the struggle.—Ex.

#### THE EXPERIMENT STATION AND THE FARMER

The Babcock milk tester is so common in farming communities these days that we hardly stop to consider that it has not always been used. As a matter of fact it has only been in use a comparatively few years. During this time, however, it has saved many millions of dollars to the American farmer; and each year the savings resulting from its use are increasing. This tester was devised by Professor Babcock while working at the Wisconsin Agricultural Experiment Station and it is but one example of what the experiment stations throughout the country are doing for the farmer.

Every state in which an experiment station has been established has had returned to it many times as much money as it has invested in experimentation. Often a single discovery has been sufficient to more than pay for all expenditures of the station. If farming is to advance to the high position it should occupy, the way must be pointed out by a scientific investigation of the principles underlying agriculture.

#### ABOUT FRAUD ADVERTISING.

There are some people in this western country that will have a "come back" at the dishonest land and real estate promoters. Some who have lost every thing they owned because of these dishonest fellows.

It will help the honest man, but the dishonest advertising man must go. It should help all kinds of honest business to know that the United States courts have taken up these bogus, dishonest advertising frauds.

We are glad to know that the Utah Farmer has always stood for honest advertising, is about the only paper in the state that will turn down this kind of advertising.



Balanced Dairying

(Continued from page 3)

With a rational use of irrigation, waters, and a system of feeding farm crops to live stock adopted, Utah's and the Rocky Mountain's soils in general will never be depleted of their plant food elements.

A soil is balanced when it is in such condition that its plant food is in available form, in sufficient quantities to feed and grow the crop planted in it.

A soil can not remain in a balanced form, maintaining its producing power unless the crops grown upon it are balanced. By this I mean, balanced in the sense of their plant food requirement and balanced in the sense of serving well to feed live stock, which use such food for a definite purpose.

A balanced food—one that is adapted for economic and persistent milk production is also one that maintains a balanced soil condition.

Alfalfa and Clover are unmistakably the best crops we can grow from which to secure the roughage or coarser foods. They furnish us with cheap protein; they are palatable, they are easily digested, they yield well and they add to the soils on which they are grown large quantities of nitrogen. They are responsible in a large measure for higher yields of crops which follow them in the rotation.

Corn is another one of the splendid foods for milk production. There is no reason why corn should not be grown here and grown profitably. This crop tends to balance the ration when fed in connection with alfalfa. It is the fat-forming the heat-producing food; it is palatable and is easily digested; it yields well and in your scheme of agriculture; it takes the place of that expensive, extravagant and needless system of "summer fallowing."

The dairy cow utilizes the entire crop—grain and fodder—providing the fodder is handled as it ought to be.

Corn is our best silo crop and I want to suggest that the best plan to follow in order to economize in milk production is to grow corn and put it into the silo.

It used to be advocated in this state that there was no place in the general agricultural plan for the silo; but conditions change, wise men get new ideas and throw false ones away and I believe that it was a false idea.

Your cows need green food the year around. In fact it is not profitable to dairy without green food. The health of your animals, the cost of your food, the high price of milk during winter months, the saving of food, the saving of labor and many, many more arguments might be advanced to encourage the erection of silos on every farm where cows are kept for the purpose of marketing farm crops.

The root crop is another one which has proved its place in economical milk production. Mangels, carrots and sugar beets all constitute splendid foods. These root crops are usually valued at \$3.00 per ton, but without any form of silage I believe their value can be put at twice three dollars. Duchess Skylark Orbsy, the worlds champion cow ate more than four tons of roots during the year as well as an almost equal amount of corn silage.

I need not say anything about your

grain crops more than that your oats, your barley, your wheat are excellent foods and if your cows are of the right kind you will receive good prices for every pound of grain you sell to them. With these balanced crops being produced on your farm, rotated as they ought to be, your soils cannot help but maintain a balanced condition.

A balanced dairy cow is one whose form and type correspond to the function of giving milk. In other words a good dairy cow has a form and type adapted to the work required of her.

The cow as we have her today is not like the cow we used twenty years ago. Today she is bred for milk production; definite selection and careful breeding has increased her efficiency several fold. A pure bred animal differs from a scrub in its ability to perform the work required of it to a better advantage, to convert farm crops into marketable products. She is balanced when she produces economically and reproduces true to type, but breeding isn't all. She has been bred for milk production but she must be well fed so that her breeding can manifest itself.

We do not feed to make a cow give milk but we feed because she has taken from her body and her blood the elements from which milk is derived and then she requires food to repair and build up her body again.

The cow isn't the whole factor however, for unless she has the intelligent co-operation of the man who must look after her wants and provide for her needs, she cannot do much.

Balanced dairying does not prevail even with soil and crops and cow all adapted to the industry. The biggest phase of the dairy business today is the marketing phase.

There is no excuse for a development of the dairy business if there is not a good profit in it. No man is justified in following the business if he cannot make money.

People must have milk and dairy products. These articles constitute the best and the cheapest foods we have today, but unless they are clean and wholesome and absolutely safe people will get along some how, without them.

The sanest way to market dairy products is to manufacture them into finished articles as near as possible to the source of their production.

In Wisconsin and Minnesota we build creameries in localities where ever we can get 600 or 800 cows together and then manufacture butter and cheese and I contend that the man behind the cow is entitled to a profit acquired from the manufacture and sale of his raw products. I regret that there are so many closed creameries in Utah for this is one of the main reasons why you are receiving less money for butterfat in Utah (outside of Cache Valley) than the farmers are receiving in Minnesota and Wisconsin.

I think I am safe in the assertion that the dairymen in Cache Valley have received a higher price for their milk than have the farmers in any other section with which I am familiar. This is due entirely to the fact that the dairy business is organized in that valley and the market is safe-guarded. There is a definite, well established interest in the manufacture of condensed milk. They are proud of the quality of their goods. Their factories advertise their aggressiveness and everything tends to lend encouragement to the men who

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If you want to get into a big paying business of your own and be your own boss, investigate the exceptional opportunity now offered in the Well Drilling Business. Ten times more work to be done than drillers to do it! \$50.00 a day clear profit is what many men are doing with



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over drilling motion. This and our Friction Hoist, another great trouble and work saver, give operator an easy right-hand control of entire machine, including raising and lowering the derrick by power. Many other equally striking advantages.

Pay for an Armstrong Drill as it pays for itself on our part cash and time payment plan.

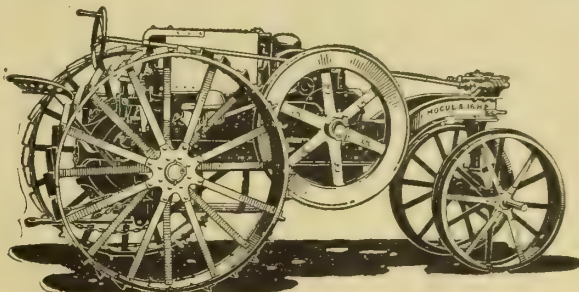
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ARMSTRONG MFG. CO.

508 Chestnut Street, Waterloo, Iowa

A Plain Statement of Fact

Mogul 8-16: \$725 Cash f. o. b. Chicago



At the present prices of gasoline and kerosene, no farmer can afford to use a gasoline tractor. Gasoline averages now over 100 per cent higher in price than kerosene and is likely to go higher rather than lower, in the opinions of men who know the oil business.

Again, it is neither safe nor economical to use kerosene in a tractor not specially designed to operate on kerosene. Merely changing the fuel mixer is not enough; the design of the whole motor must be changed.

Kerosene and gasoline tractors of equal power sell for about the same price and use practically the same amounts of fuel. On that basis a Mogul 8-16 tractor saves each year, in fuel bills alone, about a third of its price. The figures prove the truth of this statement.

If you are considering the purchase of a tractor this year, give these facts careful study, from every point of view, before you spend your money.

Mogul and Titan tractors are designed specially to operate on kerosene and to give their users the full benefit of this advantage. There are four sizes—Mogul 8-16 and 12-25, Titan 15-30 and 30-60. Write us for full information before you buy any tractor.

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(INCORPORATED)

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If you are losing 60% of your water through SEEPAGE, which is the average loss in irrigation ditches, use our LENNON Smooth Flume for Ditch Lining. Instead of building dikes to carry water across your low places, use Flume. It will not leak and will pay for itself the first year, by the water it will save you. Made in all sizes. We sell everything for irrigation.



UTAH CORRUGATED CULVERT & FLUME CO.

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## For silo owners

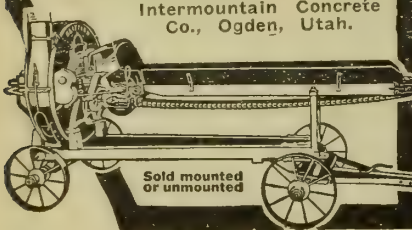
### Start now to choose your silo filler

Losses were very heavy last fall among farmers who depended upon somebody else's cutter, and couldn't get it when needed the worst. Others lost big because their cutters broke down at the critical time. The

## BLIZZARD Ensilage Cutter

is the dependable machine for the farmer—because so simple, safe and easy running. Small engines plenty powerful enough. Unlimited cutting and elevating capacity. Fills the world's largest silos as easily as twenty-footers. Self-feed table saves one man. Repair cost very little. Many still giving good service after ten and fifteen years of use. Talk with us about an ensilage cutter now Drop in for a catalog, at least.

Intermountain Concrete Co., Ogden, Utah.



Sold mounted or unmounted

## Here Is Another REAL BARGAIN

160 acres of good, rich, brush land all fenced, 3-room house, and well. High water for irrigating 40 acres. Surface water at 23 feet and artesian water at 100 feet. Improvements worth \$600. All the land can be successfully dry-farmed.

Offered at the low price of \$1600. 1/2 down and balance in one year.

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**J. W. PAXMAN**  
Nephi Utah



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Attached Instantaneously  
Name and Address. Numbered if Desired.  
LEG BANDS for Poultry, Pigeons, Turkeys  
SALT LAKE STAMP CO. Salt Lake, Utah.

## BUTTER WRAPPERS

We carry a large stock of the Best Vegetable Parchment Butter Wrappers and Especially Prepared Ink for Printing the same. We furnish them Postage Prepaid at the following Prices money to accompany order.

100	\$ .90
200	\$1.25
500	\$2.25
1000	\$3.00

Send all orders to

THE UTAH FARMER  
LEHI, UTAH

live on the farm and produce the raw material. There is no better place in the world to manufacture butter and cheese and ice cream and condensed milk; to put it a little stronger. There is no better place in the world where opportunities obtain in very particular for a full and complete development of the dairy industry. I want to tell you that there is no form of advertisement that equals the advertisement shown by the things accomplished.

A good machine which does the

work for which it was designed, efficiently without waste, is its own advertisement.

Quality of product beats any kind of literature telling about it.

Train loads of butter and other dairy products leaving this state for the markets of the world will advertise the state as an aggressive, up-to-date, conservative and permanent agricultural commonwealth when talking and boasting and boosting never will.

## Questions and Answers

Utah Farmer:

Will you please answer the following through the columns of the Farmer.

I have a fine Jersey heifer, just freshened, who has a hole in the side of one of her teats. I don't know whether it is a miniature teat or if she has been hurt. Can you give me a cure for it, and can she be cured while giving milk?

Yours truly,

L. A. Shepherd.

Answered by Dr. H. J. Frederick.

Where a cow is affected as you describe, very little can be done during this period of lactation. It often happens that there are more than one duct leading to the exterior, and as a result of this milk will flow from more than one place. Where this is up on the side of the teat it may be necessary to perform an operation. The duct is usually incised and scraped out making raw edges so that the tissues will have a chance to heal together. This is usually done while the cow is not giving milk. Sometimes during the milking period a red hot instrument is passed into the duct and then the parts sealed over, but there is usually some inflammation and it may break out again. So the best time would be when the animal is not giving milk. Then it should only be undertaken by one who understands the work, and for this purpose I would advise that you call in a competent Veterinarian.

SWEENEY

Venice, Utah.

Utah Farmer:

Dear Sir:—I have a horse that has his shoulder shrunk away, known to us as a Sweeney. What can be done to overcome this difficulty?

I also have another horse with a very large lump on the point of his shoulder, about twice the size of one fist. What can be done to overcome this?

Thanking you in advance for past favors I am,

L. D. B.

Answered by Dr. H. J. Frederick. Where an animal is affected with this trouble, as you describe, the shrunk muscles should be stimulated in some way. A blister may be applied, consisting of red iodide of mercury and cantharides in equal parts, vaseline eight parts. mixed together and rubbed into the affected muscle. If a number of applications of this kind will not stimulate the growth it may be necessary to inject some irritant under the skin. Veratrine and turpentine are often used to inject under the skin into the muscle thus affected. This material is injected about one inch apart

over the affected area. This usually stimulates the part, brings more blood and causes regeneration. In some instances it takes several months to entirely overcome a sweeney or atrophy of the shoulder.

In regard to the animal affected with an enlargement of the shoulder, it is probably a shoulder bruise. If you will look up the last issue of the Utah Farmer you will see a description of this condition. This should be treated early in order to be successful.

WIRE CUT

Utah Farmer:

I have a horse that got cut on the knee, on a wire fence last winter when it was cold. As it won't heal I understand there is Proud Flesh in the sore. Is there any cure for Proud Flesh?

Yours truly,

A Subscriber.

A wire cut in the region of the knee of a horse is usually very severe unless it is properly treated. There are a number of bones that go to make up that articulation, and where a cut is deep enough to sever the ligaments holding these bones in place, a bad condition ensues. Sometimes the joint water or oil that lubricates this part is allowed to run out and new growths develop. In your case it might be necessary to clean out the excess growth that has taken place and allow permanent healing to take place. After scraping this wound and getting rid of the proud flesh, as you call it, it might be well to apply tincture of iodine over it and keep the part absolutely clean until healing can take place and the skin covers the affected member. A thorough massage occasionally would also be beneficial.

SWEENEY

Delta, Utah.

Utah Farmer:

Gentlemen:—Will you please tell me what to do for a sweeney? I have a horse that has been sweeneyed for almost two months. There is no veterinarian here so I am compelled to doctor him myself. Please answer in your next issue if possible. Thanking you in advance I am

Your truly,

A. S. Workman.

Answered by Dr. H. J. Frederick. Where an animal's shoulder is sweeneyed, a stimulant should be applied to the affected part. Use the blister referred to in "Sweeney" above and rub the part occasionally to bring more blood, so that nature can help in overcoming the condition. If this does not overcome it, it will be necessary to inject equal parts of carbolic

## EVERY JUNK PILE

Tells a story—and it is often tragic.

Millions of Dollars worth of farm machinery finds its way into the melting pot, because it was never introduced to good oil and grease.

You are not satisfied with the results you are getting from the castor machine or harvester oil you are now using.

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## Oil and Grease

We guarantee them to last five times as long as any oil or axle grease on the market.

Write for liberal Free sample—Post paid.

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(STANDARDIZED)  
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## INSECTICIDE & DISINFECTANT FOR CATTLE SHEEP HOGS POULTRY AND

To be used for disinfecting barns, chicken coops, corrals, hog pens, out-houses and etc.

**One Gallon Calko Dip Makes**  
From 50 to 100 gallons disinfectant.  
45c qt.—75c half gal.—\$1.25 gal.  
Delivered

## Calko Hog Powders

IS A  
HOG CONDITIONER AND  
WORM EXPELLER

Don't feed Worms.  
Save your Hogs.

—25 lb. sack (delivered) \$2.00  
—50 lb. sack (delivered) \$3.50

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McIntyre Bldg., Salt Lake City, Ut.

When you answer the advertisements in this paper tell them you saw it in the Utah Farmer. Always buy advertised goods.



acid and ether into the shoulder muscle. This may have to be done a number of times. This requires a hypodermic syringe and the needle point should be inserted about one inch apart.

Ogden, Utah.

Utah Farmer:

Gentlemen:—I have a cow that freshened the first of September. Soon after a lump formed in one teat about mid-way between the udder and the end. She milks free but although she started with between four and five gallons per day, she soon dropped down and is now giving about eighteen pounds. The teat with the lump seems to give as much as the other teats. Can that lump be the cause of her dropping off, or would you consider her just a poor cow?

I bought another cow, fresh, about a month ago. There seems to be a lump forming in one of her teats the same way. Can you tell me the cause and should I try to remedy it?

I am not a fast milker but I always thought that I milked clean.

Is beet pulp a poor feed for milch cows? Some people say there is acid in it which rots the stomach and teeth?

I would like to see this answer in your paper.

Respectfully,  
C. S. S.

Answered by Dr. H. J. Frederick.

Where a lump forms in a cow's teat as you describe, it can sometimes be removed by systematic massaging. It would be necessary to rub the enlargement every time the cow is milked. You could use olive oil or vaseline to cause the skin to become pliable and if it continues to grow, it might be painted over with tincture of iodine. If there is a stoppage of the milk duct, that is, a regular growth inside, this would have to be removed with a teat vistory or a regular instrument that we use for this operation. We have regular tumor extractors with which we affect an opening and clean out the closed duct. This, however, should be handled very carefully, I would advise calling in a competent veterinarian to do the work.

These lumps may form in the teats as a result of an injury of some kind. They may also be formed by bacteria getting up into the milk duct.

In regard to beet pulp, it is claimed where this is fed to cows for long periods of time that it is detrimental to their digestive apparatus. I do not think that it would affect the teeth very much, but it is very probable that the stomach and intestines might become affected. Therefore, I would not recommend feeding large quantities for long periods of time. It may be good as a conditioner fed at intervals along with other feeds, but it should not be used for permanent rations.

Provo, Utah.

Utah Farmer:

Dear Sirs:—In several farm magazines and also in gardening pamphlets, I have noticed that in speaking of plants getting their food from the soil, there is the fact inferred, that the plants have the power to discriminate and take just what food is needed for the particular plant.

For instance: Rotation of crops, it

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(VIEW OF SHORTHAND DEPARTMENT)

Attend a school with a national reputation that holds five worlds records.

School in session all summer and new students may enroll at any time.

Positions guaranteed to all graduates.

Write for full information

### HENAGER'S BUSINESS COLLEGE

SALT LAKE CITY

is stated, should be practiced so that no one element of plant food should be exhausted from the soil.

Will you please give me your views on the matter?

Yours very truly,  
Vivien Carrol.

Answered by Dr. F. S. Harris.

All crop plants use the same foods and require the following ten elements: Carbon, oxygen, hydrogen, sulphur, iron, calcium, magnesium, nitrogen, potassium and phosphorus. The carbon and part of the oxygen are taken from the air through the leaves, while the other elements are obtained by the roots from the soil.

All crops do not require these elements in the same proportion. For example, potatoes require relatively large quantities of potassium, while alfalfa uses relatively more nitrogen and calcium. Rotation of crops helps to keep these elements balanced in the soil.

Plants take up from the soil certain elements that are not required for their food; but they have what is known as the power of "selective absorption" by which they are able to take up large quantities of the elements that are used up, while only small quantities of unnecessary elements are taken up. This is done by a balancing of the solution inside the plant cell with the soil solution.

#### TRAPEZOIDAL WEIR.

By L. R. Humpherys

Here is the way you can construct a trapezoidal weir.

Equipment.—Piece of 1 in. x 14 in. board, carpenter square, saw and chisel.

With this weir measure the amount of water in a small ditch. Measure the depth of water at the crest of the weir. Apply for Circular No. 6, Experiment Station, Utah Agricultural College, Logan, Utah. From the table of discharges in this circular, the depth of water and width of weir,

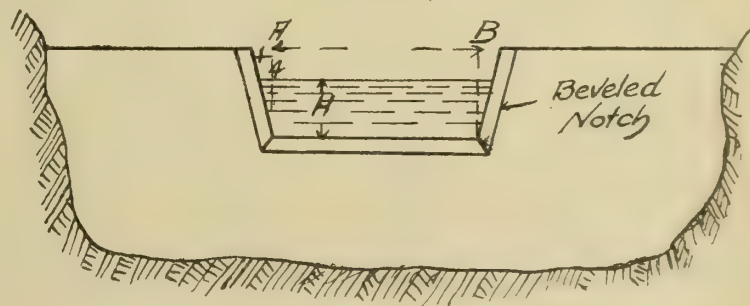


Fig 194

Instructions.—A very convenient way of measuring the amount of water in a canal or water ditch can be made by what is known as a Cipoletti Trapezoidal Weir.

Make one of these weirs according to Fig. 194 with a width AB of 12 inches. To make the slope use a vertical distance of four units for each unit horizontally. The notch should be cut with a bevel of at least 45 degrees and the bevel placed down stream. See that the edge is sharp and regular.

determine the number of second-feet of water flowing in the ditch.

#### DECORATION DAY EXCURSION ON THE SALT LAKE ROUTE.

Excursion tickets will be sold from all Salt Lake Route stations in Utah on May 29th and 30th.

Also to points reached by the Utah Transportation Co., via Milford.

Tickets will be good for return passage until May 31st.





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Guaranteed 7,000 Miles Service

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Double Service Tires are made double the thickness of the best standard make tires.

This 100% greater wearing surface naturally gives that much more mileage and service. The average of 12 miles of tough makes these tires absolutely punctureproof.

These tires excel all others for use in the country over rough and rugged roads as well as on hard pavements. They are as easy riding and resilient as any other pneumatic tire—the air space and pressure being the same.

They are the most economical and "care free" tires made and are used where tires must be depended on and tire troubles cannot be tolerated. Many Double Service style tires are in use in the U. S. government and European War service. Our output is limited to a certain amount, but for a short time we offer the following reduced special prices as an introductory offer:

#### PRICES

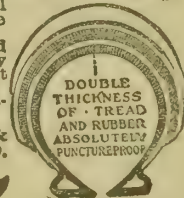
Tires Tubes		Tires Tubes	
30x3 in.	\$ 8.60 \$2.30	36x4 in.	\$17.45 \$4.65
30x3 1/2 in.	10.85 8.10	36x4 1/2 in.	21.20 6.80
32x3 1/2 in.	12.75 8.20	36x4 3/4 in.	22.50 6.75
33x4 in.	15.75 4.20	37x4 3/4 in.	28.00 6.20
34x4 in.	16.70 4.35	37x5 in.	26.30 6.60

All other sizes not included in above list also furnished. Non-skids at 10% additional.

Terms: Payment with order at above special prices, a 10% discount allowed on orders for two or more tires. All personal checks must be certified.

Try these tires now and be convinced of their very high qualities. Sold direct to the consumer only. Describe folder upon request. Write for it.

Double Service Tire & Rubber Co., Akron, O.  
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Keep it strong and good looking with

## EUREKA HARNESS OIL

Makes harness last longer and look better.

Dealers everywhere

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# Fits

Sixth Article by the State Dairy and Food Department and State Board of Health.

"Fits" is the subject of this article and fits are what some of those estimable gentleman who defraud the public are going to have when they read what we have to say about them. Reference is, of course, to the makers of patent nostrums supposed to cure epilepsy. In view of the fact that statistics show a large number of epileptics in this and surrounding states and also in view of the fact that one cannot pick up a paper or even some soulless magazine without finding a "cure for epilepsy," we think a few plain facts about epilepsy and its treatment might not be out of the way.

It is common slang humor to say that "so-and-so almost threw a fit" when something untoward occurred. But to the man or woman who really is troubled with epilepsy—and it really is more common than many think—it is a serious matter. Even if there malady is comparatively not dangerous, they are always subject to the ignominy of perhaps suffering a stroke while at a social gathering or while engaged in business.

That is the reason these fake fit cure are so insidious and menacing. Promise an epileptic that you will "positively cure" him, as so many of these fraud workers, and he will give almost every cent to get the "cure."

There are three classes of epileptics:—curable, non-curable, whose ailment is not dangerous, and the incurables whose malady may lead to destructiveness—murder or suicide while under the influence of the stroke.

Those whose malady is light and curable should avoid nostrums by all means. In the first place there should be a competent diagnosis. This will determine just where the source lies—often in abdominal trouble—and for such cases there is a certain therapeutic treatment that enables nature to rid the body of the disease.

The epileptics, whose cases are non-curable but not dangerous, may live to a ripe old age with proper care and their infliction may hamper them only slightly. To this class of sufferers nostrums—medicines of any sort unless they be but tonics of the right sort—cannot be anything but harmful. Proper diet, proper exercise, proper living will lengthen their lives indefinitely. The worst feature about such persons being given "cures" is that they believe the dope will help them and they disregard some of nature's laws as a rule in the thought that the concoction, whatever it may be, is stopping their sickness. Only one result can come then—the worst stage of epilepsy with all its horrors and a possible ending in idiocy before death comes as a relief.

As to the incurable; the best method of treatment is as is the preceding class but in addition they must be watched. Often such persons commit injuries to themselves and others while temporarily under the influence of a mental aberration, induced by the epilepsy.

Just what are these nostrums made of that the heartless fakers endeavor to foist on suffers from this ailment? Well, in the first place, there is but one drug to which fits will respond and that is bromides. Formerly physicians

gave bromides in each cases because bromides will temporarily suppress the fits. But they soon learned that this suppression only brought the sickness on in an aggregated form later and that bromides were worse than nothing. So that now no reputable physician will prescribe bromides for a person troubled with epilepsy.

But the patent medicine fraud artists see in that fact their big opportunity. Bromides will suppress fits. All right, we will make a fit medicine—a cure—out of bromides. It is what ninety per cent of the fit cures is made of. Why? Because temporary relief means optimism on the sufferers' part; it means, perhaps, testimonials in the first blush of relief from strokes; last, but not by any means least, it means dollars and cents to the makers. So the letters of type stating that certain nostrums will "cure" epilepsy are printed large and black.

Every time you see large black type stating that "fits can be cured by such-and-such a remedy," just remember that black is the color of mourning; remember that every cent spent for such fakes is money wasted and that every drop of bromidical drug taken into the system torn by epilepsy is as so much poison.

W. Earl Flynn, the world's most famous health expert, the man who today is lecturing in Salt Lake nightly before thousands of health seekers, has this to say about patent nostrums:

"When you have a headache; when you have anything at all the matter with you, stay away from the drug stores and the patent medicine fakes. Many become inveterate drug fiends from taking dope to cure illnesses, real or fancied. Let Dr. Nature cure you."

Flynn, who is himself a former practicing physician and who is noted as one of the foremost, if not the foremost, health lecturer in the world, says that he cannot cure any disease.

"I can give you the treatment that will help nature cure it," he says, "but I nor anyone else can cure it!"

Yet these fakers who would take your dollars and wealth away at the same time have the effrontery to assert they can cure epilepsy and other constitutional ailments. The only excuse for the existence of such fakes is that the public is gullible—especially the ailing public, and will swallow lies, nostrums and all and pay well for being defrauded. The people must waken up and right now!

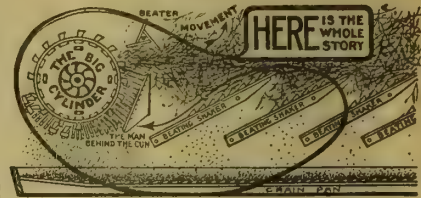
Don't you readers know that the Rockefeller institute would pay a large sum to any man who produced a real cure for incurable epilepsy? Don't you know that any man or company who had a cure for such an ailment would no more need to advertise for patients than the Utah Copper company might need to advertise its stock for sale? The reason they spend so much money in ads is that so many fools have paid hard earned money and got no returns. Don't be one of the fools, even if you are ill. If your case is curable get it cured, not tampered with. If incurable, stay away from the medicine. They should be labeled with the skull and bones—they are poisons to you.

# PREPAREDNESS

Produces Victory

## The Red River Special

IS PREPARED



In the trenches of a great army or in the threshing of a great crop those who are rightly prepared do not go down to defeat. Beat off the nation's enemies.—BEAT OUT THE NATION'S GRAIN. It must be done if the nation is to live.

In either event it is preparedness with "the Man Behind the Gun" that does the work.

This patented device, found only in the Nichols & Shepard Company's threshing machinery, can show more preparedness for securing and more actual capacity in securing and saving grain than any other separating mechanism that inventive ingenuity has yet produced.

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## Big Money in Running Water

Let us start you in a business that will make you from \$15 to \$50 a day when farm work is slack. Other men have done it for years with an

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One Team

**Improved Powers Combined Well Boring and Drilling Machine**  
Same rig bores through any soil at rate of 100 ft. in 10 hours, and drills through rock. One team hauls and operates machine. Engine power if wanted. Easy to operate—no experts needed.  
Small investment; easy terms. Make machine pay for itself in a few weeks work.

There is a big demand for wells to water stock and for irrigation. Write for free illustrated circulars showing different styles.

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160 Acres at Tremonton, Utah, if you are looking for a beautiful farm right near one of the liveliest towns in Utah that is growing fast; \$200,000.00 worth of business blocks were built within less than a mile of this property last year. Every acre under the highest state of cultivation; beautiful big home large trees, nice orchard, at \$150 per acre on easy terms.

160 Acres in Cache Valley, belonging to an absentee owner. This property is located in the Garner District. Has a full water right from the Canal. We will sell this property at the very low price of \$50.00 per acre. Will consider exchange on smaller place or Salt Lake City property.

One of the best country homesites there is in the state. This place consists of a thoroughly modern 9-room house, with big, fine trees, also has a large grove of beautiful oak trees in their natural state, fish ponds, beautiful meadows. For sale at a bargain.

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HAROLD SOMERS, 160 46th Ave., Brooklyn, N. Y.

## HOME

### REVIEW OF CIRCULAR NO. 55 Measurements for the Household.

By Gertrude McCheyne.

The circular referred to is published by the Department of Commerce, Bureau of Standards, Washington, D. C. and is a valuable contribution towards systematizing the work of householders. It consists of 149 pages of material for practical use, is well illustrated and contains information of value to both men and women. Members of the Housewives League will find it of assistance in their crusade against shortage of weight and measurement in purchased materials.

The introduction shows in how many ways weighing and measuring enters into home operations and the increased efficiency that results in thinking in terms of definite quantities.

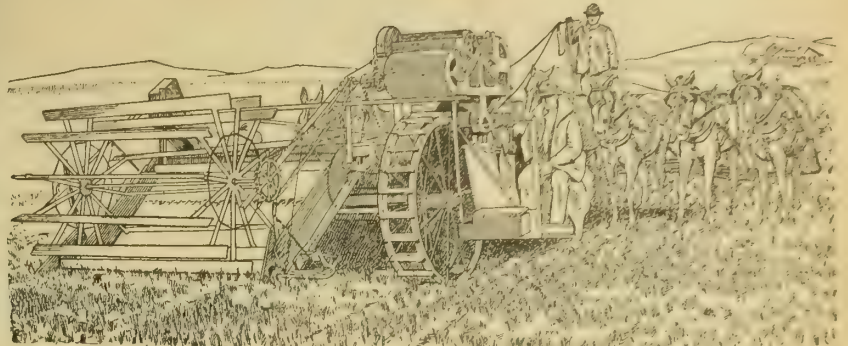
Under the heading "Commodities" measurement as a factor in purchasing for the home is taken up. Illustrations of test sets of measures with instructions for their use; also pictures of fraudulent containers such as milk cans, bottles, and so-called quart measures show how the purchaser of household goods pays for what she does not receive and throws a side light upon the high cost of living. The chapter closes with some definite instructions on the checking of certain commodities and containers.

The chapters on "light" and "heat" include descriptions of thermometers, tests for the accuracy of same, the heating value of fuels with tables showing comparative heating values and cost, how to use and save heat in household operations, with a table of useful temperatures which should be charted and hung up in the kitchen. Under the subject of "light" the reading of electric and gas meters is handled, which if the housewife will study we foresee easier days for the suffering man who reads the meter.

Another article deserving better usage than it usually receives is the clock. The care, setting, regulating and correcting the setting of a clock are handled in a most instructive manner. Its value in the kitchen to control cooking operation is shown and the suggestion is made that an alarm clock is useful where the habit of watching the clock has not been formed. It is also perhaps not generally known that if the clock is expected to keep constant time, as nearly as possible a constant temperature must be kept. In reading this chapter on time measurement one calls to mind a family who always keeps their time piece ten minutes slow in order to hurry laggards by startling them. Another housewife keeps the clock three-quarters of an hour fast so as to give the sense of having lots of time to spare, while in many other cases the clocks are either not going or are all registering different results on their dials. If the circular accomplishes the awakening of a sense of the importance of correct time measurement in home operations, it will have done something towards lightening the labor of the housewife.

While the foregoing is only a very brief review of the subjects treated, we trust it will arouse sufficient interest to induce the homekeepers of Utah to send for their instructive and interesting contribution to their home work.

## PREPARE FOR THE HARVEST NOW



### The "IDAHO" COMBINED HARVESTER.

Operated by 8 horses, 1 man and a boy.

Last year we were unable to supply the demand for these wonderful machines: This year the demand will be greater and it is harder to get raw material, therefore the wise buyer will have his order in early and be sure of his machine.

THE "IDAHO" cuts a 9 foot swath and the cylinder is 9 feet wide threshing the swath as it leaves the platform and distributing the straw and chaff evenly on the ground for fertilizing.

The object in raising grain is to make a profit out of the ground and if it is costing you \$5.00 per acre to cut, haul and thresh, you can save \$4.00 PER ACRE by using the "IDAHO" COMBINED HARVESTER.

The "IDAHO" COMBINED HARVESTER finishes the job in the field. The only hauling necessary is the sacked grain. There is no expense of hauling the straw, stacking, damage from storms, waiting for the thresher, taking chances on the separator catching fire or any other delays or losses common to the old way of getting the crop ready for market. With the "IDAHO" your grain is ready for sale as soon as it is cut and if you want to store it, it takes up but little room compared with the old way of stacking.

Place your order NOW for one of the "IDAHO" COMBINED HARVESTERS. The machine with cylinder full width of swath. It recleans and sacks the grain in the field.

Sold by

## Sidney Stevens Implement Co.

OGDEN, UTAH.



## Rush Valley

### A Survey of Dry-Farm Conditions in Rush Valley, Tooele County.

By J. W. Paxman, Extension Specialist in Dry-Farming for the Utah Agricultural College.

#### Area and Extent.

Rush Valley covers an area of about 360 square miles or 230,000 acres. It joins onto the south of Tooele Valley and continues directly south from Stockton to Boulter Summit, a distance of 38 miles, varying in width from 5 to 20 miles, bounded by the Oquirrh mountains on the east and the Onaqua range on the west.

#### Vernon District.

There are perhaps 28,000 to 30,000 acres of tillable lands in the Vernon District situated in the valley south of the old town of Vernon, and, 4,000 to 6,000 acres in the Lofgreen District, a considerable portion of these lands being already under cultivation. It is in this district where the sturdy, stalwart, frontiersman and pioneer, Isreal Bennion, has made the impress of his influence in the development of dry-farming, having a strong conviction of the possibilities of this section, put the art into practical use a number of years ago. Here also, in the very heart of the district, is the big Dry-Farm Stock Company, owned by Cache Valley and Salt Lake people, operating a tract of upwards of 8,000 acres, having brought under cultivation more than 4,000 acres.

#### Character of Lands.

The lands vary somewhat in quality. Those in the south and west being more fertile, but with the exception of some small tracts where drifts of cobble rock and ledges come to the surface, all will respond favorably to proper cultural methods. It is noticeable that the lower lands in the district require more working and cultivating to ripen them and to make the plant food available. That is to say, they will show a marked increase in productivity where left in fallow each alternate year and properly cultivated. They are a little slow to respond, but have the power in them if treated right.

The west side enjoys the better of the situation so far as fertility and precipitation is concerned, but is largely undeveloped as yet. The land is practically all owned and no doubt will relieve some activities in the near future.

#### Methods Followed.

As a rule the crops up to this time have not been generally encouraging and many of those operating the lands have been discouraged. However the causes of failures are attributable to the mismanagement of the soil rather than to the fault of the elements or the bad character of the land. It seems to be the general rule for farmers to attempt to clear the land of brush and plow at one operation, with the result that either is but half done, and usually done out of season. Cropping has followed these inexcusable methods, based upon a false hope of any profitable harvest. Even on the second operation, when conditions would permit of a deeper plowing, not many acres in the district have had the plow strike them deep enough to warrant a good crop. Under these methods of poor plowing

and plowing out of season and with nature administering her just and severe rebuke to the farmer, he has again unwisely tempted nature and courted her displeasure by planting the following year, and that too, more often on stubble than on plowed ground.

The precipitation in this region is ample, seldom registering less than 15 inches annually, and more often 16 to 20 inches. The soils are reasonably good and profitable crops would be the result if good methods were practiced. In few sections of the state are practiced such slipshod, careless, wrongful methods as are displayed here. When dry-farm methods are rightly followed in the Vernon District, there will be train loads in place of car loads, of first class wheat shipped into the home and western markets. Yields as high as 30 bushels have been reported on small areas receiving proper treatment.

#### Lofgreen District.

The Lofgreen District is favored with heavy snows during the winter season and with ready fertility in the soils. Poor methods are also followed here, but with some better returns than at Vernon. While this section is rolling and uneven and somewhat broken with cedar hills, it can be made a very successful dry-farm area, growing such crops as potatoes and alfalfa, as well as oats, barley and wheat.

#### Clover District.

At Clover and St. Johns in the northwest of the valley there are limited acres of choice, well fertilized soils, and while the district has not been active in the past, the lands are fastly being developed and under fairly good methods—much better than those that prevail at Vernon. Some of the farms here are of a rich, mountain loam and capable of growing alfalfa, potatoes, corn, beans, sudan grass and the grains. The district comprises about 10,000 to 15,000 acres, most of which is tillable, giving evidence of being exceptionally good lands.

Yields as high as 35 bushels of wheat are reported under favorable conditions. In striking contrast to the southern end of the valley, this section is clearing the lands of brush before attempting to plow, with yields in prospect of 20 to 25 bushels per acre for the first plowing, as against almost total failure where the work is improperly done. With the railroad within 3 to 7 miles, providing a cheap haul to market, this promises to be a rich little district, since the lands have good productive power and the rainfall is sufficient for profitable crops.

#### West Side.

There are other irregular small areas along the west slope of the valley between Vernon and Clover that will, under wise selection, make good dry-farms, although much of this tract would be undesirable because of being poor lands or containing too much mineral salts. A considerable

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Write for prices on  
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ERNEST WILKES STOCK CO.

Highest Class Royalty Plays  
NEW BILL EVERY SUNDAY  
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portion of the greasewood lands can be reclaimed by turning under some cover crop, preferably sweet clover. They appear to be strong soils but heavy and stubborn.

Artesian water has been developed in a limited way, which gives some promise of greater possibilities in growing alfalfa and sweet clover.

#### East Side.

There are perhaps as many varying conditions and classes of soils in the valley as are found in any part of the state. On the south and west we find the soils grading from a rich, black, mountain loam to the stubborn and lifeless clays, including alkali flats.

The eastern and central portions of the valley present a rather desolate and forbidding aspect. The soils are much less responsive, with stunted shade-scale and greasewood much in evidence. With the exception of a very few small areas, the whole distance from St. Johns to Dunbar stations on the east side of the railroad tracks of the Salt Lake Route, and considerable on

the west side, are uninviting and unworthy of any attempt in dry-farming under present known methods. The soils are generally poor in quality and desert in appearance.

The precipitation according to data available from the older settlers, is evidently much less than on the west side; then, too, another discouraging feature is the prevailing hot winds in



summer and the bleak, cold blasts of winter, this part of the valley permitting an uninterrupted sweep for this moisture dissipating influence.

#### Warning to Settlers.

Large tracts of these lands have recently been thrown open to entry under the enlarged homestead act and a certain class of land dealers, or land locators, so termed, are placing homesteaders on these lands charging as high as \$1.00 per acre. Some settlers are placed on tracts so forbidding that, it is said, the lizard of the desert would be loath to inhabit. Surely such homesteaders are doomed to bitter disappointment, with an utter waste of money and energy if they are to operate for crops on a purely dry-farming basis.

If there be hope for water from any source at any reasonable cost, there may be some justification for placing settlers upon these lands; otherwise it is a contemptuous piece of practice, and we issue this as a warning to all; that they carefully and intelligently investigate conditions, or get some qualified person to pass on the merits of the lands and report on possibilities for farming purposes, before the entry is made and the money paid over to the unscrupulous landshark. The better element acquainted with prevailing conditions condemn the practice and they have bleeding hearts when they see innocent settlers so terribly betrayed.

#### Activities of Tractors.

There are 12 plowing tractors now in the valley, all in commission and doing more or less work, with the exception of two. Several others are said to be ordered and will soon be at work. A close investigation of the work done by this class of motive power could indicate that at least three-fourths of it has been unsatisfactory and generally giving low yields at harvest time. Two or three of the tractors, which have qualified operators, have been more successful. It is a fact, however, that where the clearing and plowing is done with horses, the yields are generally better.

#### Market Advantages.

The valley is favored with railroad and market facilities which give to it great advantages, having the Salt Lake Route running almost directly through its center from its extreme ends.

The markets for its products are at either end of the line—Salt Lake and Los Angeles—thereby giving additional value to the good lands.

#### General.

Many of the newer settlers are poor people and poorly equipped to grapple with the stern conditions of developing the raw sage brush lands, and to them the struggle is a trying ordeal. It would be much better if the settlers would provide themselves with a resource of from \$1,000 to \$2,000 before attempting to spend their whole time and energy in developing a homestead, for it is no little task for the ordinary man with limited means to subdue 160 to 320 acres and convert them into paying farms.

#### Demonstrations.

Some important demonstrations have been inaugurated and well under way. One to demonstrate the cost and yearly income in developing a large tract of brush lands into good crop producing dry-farms, by the use of a gasoline tractor for plowing. Another to demonstrate the producing power of shadscale soil in growing wheat on fallow land and the increase produc-

tivity of such soils by a system of soil building by means of turning under clover crop. Still another on the producing power of ordinary sage brush land, first crop and first plowing when proper dry-farm methods are employed. Some valuable data are anticipated from these demonstrations in the next two or three years.

#### NOTES FROM A

##### HOUSEKEEPER'S EXPERIENCE

Each individual is born with a right to life. For want of knowing how to conserve that life we often scrimp ourselves on the latter end. The body builds to the picture the mind carries. Smile over your work and you will enjoy it. Use the brain to save time, effort and material and "kitchen drudgery" becomes keen intellectual pleasure.

##### A Few Hints to Help:

The heat of the stove falling on the back affects the nerves. Iron rings—as the bales of lard pails, etc., slipped under the basin on the stove keeps the simmering heat and prevents sticking.

A memo tab, with a pencil tied to it, hung on the kitchen wall, is of very great value.

Do not dazzle the eyes by a spotless white kitchen. A soft color rests the body by reason of its effect on the mind. The sliding door for the cupboard is often more effective than the swinging one; while the swinging one is better than the balanced one.

Green vegetables can be dried almost as effectively as they can be canned if protected from the rays of the sun while drying and set to cook in boiling water with soda when ready for use.

Never boil dried corn. Soak, heat, season and use.

Some very valuable common recipes:

**Fruit Loaf**—Roll out a thin sheet of light yeast dough. Cover with dried prunes soaked and cut (any kind of dried fruit will do). Roll up as a jelly roll, roll thin and spread with fruit again, mold in a loaf, raise and bake.

**Fruit Taffy**—Equal quantities of apple sauce and sugar simmered until it can be stretched when cool.

**Orange Candy**—Cut orange peel in cold water and let stand over night. Drain, cover with cold water and cook until tender. Drain, add about one-half as much sugar as peel and stir and cook until the peel is saturated with sugar. (Takes the place of candied orange or lemon peel in cake).

**Baked Dried Apples**—Soak over night. Add a good sized piece of butter and bake in a covered dish until tender.

**Doughnuts**—(took the prize at State Fair) Beat 1 egg, add 1 c. sugar and 1 c. buttermilk; sift in flour to make a soft dough, 1 tsp. soda, tsp. nutmeg and add 1 tbsp. each of cream and alcohol. Keep the dough as soft as possible. Handle as little as possible.

**Mildon Onion**—Warm the unpeeled onion in a slow oven until the milky character has just changed. Peel, slice in hot cream, season and serve.

**Onion Pudding**—1 pt. milk, 1 pt. soft bread crumbs, 2 beaten eggs, 1 onion chopped fine, salt and pepper to taste. Bake until firm.

**Delicious Ham**—Rub the slice with bread crumbs. Place in a pan, cover with sliced raw apple and bake.

In cooking rhubarb add a pinch of soda.

## For Every Man, Woman, or Child

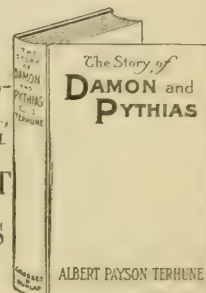
A book exists somewhere of some kind, which they would like to own if they knew about it.



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Is not a chance—it is the result of the expenditure of millions of dollars in money and the working-out of a positive plan of betterments, which has extended over a period of many years—

As a consequence, the Union Pacific System has been brought to a state of operating regularity—the effects of which are felt through every channel of the service; the work goes on from day to day, and the public is assured of the full benefits resulting therefrom—

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In traveling, you are entitled to stability—service, and protection, for every dollar you expend—

The Union Pacific System has been termed, "The Standard Road of the West;" it is "standard" in everything the world implies.

Six trains east daily; two trains north and northwest.

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SALT LAKE CITY, UTAH.





### Is Your Wagon Deformed?

It would not be if you had used

## MICA AXLE GREASE

Gives long life to your wagon. The mica makes a smooth bearing surface—prevents friction and wear.

Dealers everywhere.

THE CONTINENTAL OIL CO.  
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Among the chief articles of diet, sugar takes high rank as to the available energy when consumed. Sugar ranks at 98 per cent meat and fish at 87, eggs at 89, dairy products at 93 and vegetables at 95. Sugar that is made in Utah and Idaho is the equal of the most highly refined imported sugar made from cane.

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When you answer the advertisements in this paper tell them you saw it in the Utah Farmer. Always buy advertised goods.

## POULTRY

YOU DON'T NEED TO DOSE  
FOWLS TO KEEP THEM WELL  
R. H. Needham.

"To feed medicine to a lively, industrious, healthy fowl that is apparently in the pink of condition is as reasonable as to begin dosing a robust workman who is turning out the maximum amount of work expected." "Yet, an idea prevails in this state that in order to keep poultry profitably, or with any degree of satisfaction, one must feed some kind of tonic in the way of a poultry food.

This tradition or practice does not take into account, as a rule, the physical condition of the fowls nor the added cost of maintaining the flock. Moreover, fowls do not take kindly to medicines and will not eat such material unless mixed with feed or placed in drinking water.

The average composition of the poultry tonics found on sale shows a high percentage of base or filler consisting of grain screenings, shorts, oyster shell, Venetian red, charcoal, together with meat scrap, blood meal, and similar ingredients. The quantities of these materials range variously from 50 to 90 per cent of the whole compound. To these bases are added various quantities of certain drugs such as nux vomica, sulphur, saltpeter, gentian, sodium hyposulphite, and sodium sulphate, the added drugs being in small proportion to the total mixture.

#### Many Are Short Of Medicine

Such materials as bone meal, grit, ground oyster shells, and charcoal are really not medicines any more than are tankage, meat scrap, turnip tops, and cabbage. These materials are good in a sense and are indispensable in part to the diet of poultry. Yet many of the so-called poultry remedies on the market are made up, to a large extent as to weight, of charcoal, bone meal, or oyster shells, while the real medicinal substance that each fowl might get from the mixture would be entirely too small to be of any medicinal value. There are exceptions, a number of remedies on the market being prepared in a more scientific manner.

The ardent advocates of poultry remedies declare that one can hope to keep up the maximum growth and productiveness only by constant stimulation and that when the flock is doing best is the time to look for a slump in production, a retardation of growth, or the appearance of some dread malady. Accordingly, continued dosing is absolutely necessary and a sure preventive of loss or disease.

We do not view the poultry business or poultry remedies in this light. Experience teaches that poultry remedies utterly fail to eradicate certain physical conditions which all too frequently are overlooked by the poultry keepers.

Vermine infested fowls, filthy and insanitary quarters, insufficient or unbalanced rations, lack of exercise, are some of the conditions upon which medicines have very little effect. Feeding poultry foods to keep chickens healthy has its place in poultry keeping, but the use of these foods should be governed by common sense and reason.

Care Often Prevents Disease.  
Abnormal conditions such as dis-

# YOU HAVE BEEN LOOKING FOR THIS CHANCE

## A NICE LITTLE FARM OF 50 ACRES

that can be bought for \$75.00 per acre and will make you the permanent farm proposition you have wanted.

The soil is a rich, black loam—raises Alfalfa, Beets, Fruit, Garden truck, etc.

## PLENTY OF WATER

Prior water right—water at \$1.00 per acre when used.

On the railroad and adjacent to two very live mining camps. Good market for farm products.

## GOOD SCHOOLS CLOSE BY

WRITE US TODAY for information—or better—come in and see us about it.

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604 Dooly Building

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## YOU CAN SECURE GOVERNMENT LAND

(surveyed or unsurveyed)

## WITHOUT HOMESTEADING.

by using U. S. Government Land Scrip. We can furnish any kind of scrip at market prices. We have a few hundred acres of scrip on hand which has been "APPROVED" by the Department at Washington. Scrip comes in 40, 80 and 160 acre tracts. Prices on request. **ROBERT A. KEAN and CO.**

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WHEN IN LOS ANGELES  
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EUROPEAN  
200 OUTSIDE ROOMS  
150 WITH BATH  
420 W. 2ND ST., NEAR HILL  
NORTHERN HOTEL CO., PROP.  
FRANK L. CRAMPTON, MGR.  
CAFE  
IN CONNECTION  
RATES \$1.00 PER DAY AND UP

ease demand in the first place care, then medicine and treatment. Often, with proper care, disease would not occur.

Intelligent observation of fowls and more complete knowledge of poultry diseases and ailments will enable one to exercise proper judgment in instances where the fowls are not doing as they should. To be able to de-

tect the first signs of diarrhoea or roup requires keen observation and is an essential to good poultry keeping, but it is just as important to be able to distinguish the effects of vermin and malnutrition. All poultry food manufacturers bear with strong emphasis on care and proper feeding if one wishes to obtain results from  
(Continued on page 15)



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**For the Buyer**

This market place offers our subscribers and readers a very good place to advertise. If you have something to sell or want to buy here is the place to tell it. These advertisements are read because they offer bargains, your bargain should be here. Take advantage of this opportunity today.

**For the Seller**

## Gem Herd of Improved Chester White Swine.

This Herd Bred, Raised and Sold. Both Boar and Sow Grand Champions of the World's Fair held at Frisco this last year. Both Sire and Dam, is still in the herd. If such breeding interests you, write for illustrated catalogue. Stock of all ages for sale at all times.

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**Idaho**

## HOLSTEIN BULLS FOR SALE

Sons of Wachusett's Creamelle George the 2nd whos daughters have made from 350 to 500 pounds of butter fat a year just with ordinary care. Wachusett was 2nd prize aged bull at the State Fair last fall and all of his get were first in their class but one. His dam gave 105 pounds of milk in a day that tested better than 4 per cent. No. 1 Iowana George 3rd a fine 18 months old son of Iowana Colanath Alberkerk. A high testing heifer from Iowana Farms, Iowa, her dam has a 19 pound record. This young bull was Junior Champion at the State Fair. The first check for \$200 takes him. No. 2 Wachusett's Beauty a 12 month old son of Maudeline Of Beechwood Beauty with a 23 pound butter fat record, milk test 4.6. She is a full cousin to Colanath 4th's Johana, \$150 buys this one. Take no chances, get a bull from a proven sire and one that has produced the goods. Offer several others from 6 months to 1 year old from \$75 to \$125 each.

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Beautiful, useful and profitable. Best for showing; best for egg-laying; best for table. Largest Wyandotte Farm in Southwest and only complete family of Wyandottes known. Eleven varieties and each from finest strain bred in United States. Write for full particulars. VILLA WYANDOTTE FARM, Villa Road Lamanda Park, California.

WANTED to hear from owner of good farm for sale. Send description and cash price. R. G. List, Minneapolis, Minn.

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Good land between 13th and 14th South for quick sales; \$425, \$10 cash, \$10 per month.

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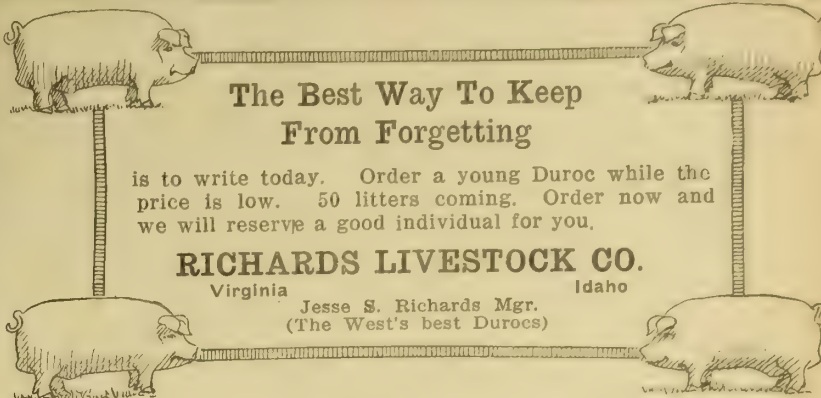
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Virginia Idaho  
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(The West's best Durocs)

## Pure Bred Unrelated DUROC JERSEY PIGS FOR SALE

\$5.00 apiece.

H. RONNENBERG

Murray

R. F. D. No. 3

## A Bargain

Ideal City Home of Ten Rooms, elegantly furnished with all modern improvements and conveniences, located on paved avenue, east side residence section of Salt Lake City, for sale reasonable. For particulars, address 236 Atlas Block, Salt Lake, Utah.

## FOR SALE

Utah Big Type Poland China Hogs. Fall and Spring Boars, a few gilts. Best blood and breeding, real big type. Write or come and see them.

H. G. JOHNSON

East Garland

Utah

## FOR SALE

Registered Duroc Jerseys

100 fine, youngsters and some fine brood sows.

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R. D. Box 40

Trenton, Utah

As good as new, has not had four months use, a No. 5 Oliver typewriter for sale cheap. Address D-201 East Broadway, Salt Lake City, Utah.

## FOR SALE

Three pure bred registered Percheron mares. Must sell at once. One now in foal. Price for the three \$1,000.00. Write or call on

E. D. HATCH

Heber

Utah

Do not wait until you have used the last Butter Wrapper before ordering more, because it takes time to print them.

When you answer advertisements, tell them you saw it in Utah Farmer.

## YOU DON'T NEED TO DOSE FOWLS TO KEEP THEM WELL

(Continued from page 14)

feeding their particular brands.

The cost of keeping a fowl that runs at large need be of little concern to the owner so long as the range affords food material of sufficient variety. The bird will make its own selection and will include in its bill of fare, at little cost to the owner, such materials and herbs as are good for its constitution. Fowls confined in pens having no range, require more feed, perhaps, all of which has to be placed before them.

## Tonic Adds Much To Cost.

The average annual cost of keeping a hen depends much upon the variety of feed, ranging from \$1.00 to \$1.25 a year for pen feeding. Add to this the cost of a manufactured poultry food or tonic retailing for, say 25c a package and the weight of the contents averaging one and one-half pounds. One such package will feed 12 hens about 24 days. To feed every day during the year would require 15 packages costing \$3.75. Charge 12 hens with this account and we have an average added expense of 31c each. This expense may be slightly lowered by purchasing the remedy in large quantities. Following the directions for feeding the remedy increases the annual cost of keeping each fowl from 25 to 30 per cent.

If the net profits of the flock will stand the added expense, no money will be lost. Records of poultry keeping show that it is hardly possible to add such a large increase to the cost of keeping and expect additional profit.

The instructions for using these remedies prescribe cracked wheat, shelled corn, linseed meal, beef scrap, vegetables, grit, and other food. It is plain that the balanced ration is the important thing not the poultry remedy.

Instead of investing continually in medicinal preparations to feed healthy birds which show no indications whatever of being out of condition, it would be far better and more profitable in the end that one use the extra dollars to improve the poultry, the premises, or the daily rations. Only the sick need treatment and medicine, and why create a sick account in good health?"

Mention Utah Farmer when you write.



## Salt Lake Route Is Now Official Name

Designation Adopted Is to Be Printed on All Company's Stationery. Will Save Confusion.

The San Pedro, Los Angeles and Salt Lake railroad is to be renamed in honor of one of the two most important cities on the line. By the management it has been officially designated as the "Salt Lake Route."

For years past the road has been designated as the "Salt Lake Route" by the passenger traffic department, and it was at the suggestion of T. C. Peck, general passenger agent, that the name has been adopted by the management of the road. The old name is to be dropped entirely and "Salt Lake Route" is to appear at the head of all company stationery.

By many persons particularly throughout the east, the road is generally known as the "San Pedro." Traffic officials argue that San Pedro is one of the smaller towns on the line and, therefore, the name, as applied to the road, is insignificant, while Salt Lake is one of the two most important towns, the eastern terminus of the line, and the town is entitled to such recognition and the publicity that naturally would follow. Anyway, "Salt Lake" is far more distinctive.

### Much Time Saved.

Then there is another reason for the change in name, in which the traffic department is vitally interested. In the east the ticket and billing clerks are in pretty much of a rush all the time. San Pedro, Los Angeles and Salt Lake requires quite a few strokes of the pen and the clerks are inclined to take all the short cuts possible. One of the best known short cuts is to use initials, instead of names, as frequently as possible. S. P., L. A. & S. L. makes rather an awkward bunch of letters to string out with a pen that is working overtime, so the clerks fell into the habit of eliminating the last four letters in routing by way of the Salt Lake Route, leaving just the initials "S. P." As a result a great deal of business is said to have been diverted from the Salt Lake Route to the Southern Pacific.

### Confusion Averted.

In other instances the passengers have gone over one road and the baggage over the other, and trouble without end resulted. By erasing the old name from all the guides and stationery and substituting the name "Salt Lake Route" instead, it is hoped by the officials of the road that a great deal of the confusion will be eliminated.

After properly heading all the stationery the officers of the company wish next to have everybody call the road by the new name. Just to start the thing off right, they are especially desirous of having the residents of Utah forget the San Pedro, Los Angeles & Salt Lake railroad and always remember to call the road the Salt Lake Route.

### THE ONES TO DODGE

"Doesn't it give you a terrible feeling when you run over a man?" they asked him.

"Well, if he's a large man," replied the automobilist, "it does give one a pretty rough jolt."—Exchange.



## THIS AMERICAN QUEEN COLLECTION OF THE MOST BEAUTIFUL ROSES FREE

To All Readers of  
Utah  
Farmer

WE BELIEVE in beautifying our homes and surroundings so that they will be a pleasant place to live. Nothing adds more to the beautifying of the Farm Home than fragrant flowers and the Rose is Queen of Flowers. Here's a Wonderful Bargain Offer we have been able to obtain for our friends—and that's you.



# 8

## Hardy Ever-Blooming Roses The Kind That Grow and Bloom

To each reader of the Utah Farmer, we want to deliver this collection of eight hardy ever-blooming rose bushes. Every lover of beautiful flowers should send us their order at once as these roses are the kind that bloom every month of the growing season, producing great masses of large double flowers from early spring until late fall. They possess all the good qualities of vigorous growth, delicious fragrance, beautiful color and fascinating form.

We enclose with each collection special printed instructions on the planting and care of roses and guarantee them to reach you in healthy growing condition. We will deliver them at the proper time to plant in your garden.

This choice collection of Roses consist of such beautiful varieties as Etoile De France, My Maryland, Bessie Brown, Etoile De Lyon, Helen Gould Gruss Teplitz, Ulrich Brunner, La France, Kaiserin Augusta Victoria. A choice variety of colors and some of the finest roses grown.

## Our Splendid Offer

Send us \$1.00 for a years subscription to the Utah Farmer and we will deliver the entire collection of eight Hardy Ever-Blooming Roses to your post office address positively free. Don't delay but send your order today. These roses are what is known as dormant and can be planted at any time during the next 3 or 4 weeks.

Any old subscriber can take advantage of this offer by paying one year in advance. If you are paid in advance and want this beautiful collection of roses send us one dollar and we will send roses and have time of your subscription extended accordingly.

Send today for this beautiful collection of ever-blooming roses to the UTAH FARMER, Lehi, Utah.



UT

Ag. Sem.

# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region

OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE

VOLUME XII; No. 44

LEHI AND SALT LAKE CITY, UTAH

JUNE 3, 1916



(Courtesy of the Oregon Short line R. R.)

## A STREET SCENE IN ONE OF OUR SMALLER TOWNS.

A great number of trees adds to the beauty of the place. Many of the younger towns plant the quick growing trees at first and later they are exchanged for the hard wood or slower growing varieties.

When careful thought and attention is given to the proper selection and planting of trees we get much better results.



## POULTRY

### ESSENTIALS FOR GROWTH OF CHICKS

By Helen Dow Whitaker, Head of Poultry Department, State College of Washington.

The primary aim in the management of chicks is growth. The growing period is the critical period in bird life. Although not fully developed and matured until the twelfth to fifteenth month, a chick leaps into approximately full size in the short lapse of six to eight months. Some recent weights made by S. Hart, a student in the poultry department at the State College of Washington, showed the following gains:

Weight at hatch	Leghorns	R. I. Reds	Rocks
1.406 oz.	1.458 oz.		
3 weeks	2.582 oz.	3.375 oz.	2.875 oz.
4 weeks	3.208 oz.	5.125 oz.	4.541 oz.
5 weeks	5.625 oz.	8.416 oz.	7.708 oz.

Birds are the most active, maintain the highest bodily temperature, and perform the most rapid digestion of food of all the domestic animals. It follows that all their functional activities, that is, their bodily processes, must be rapid. It also follows that results of wrong care or feeding are not only more quickly disastrous, but the disaster is more likely to be lasting than with other animals. One may give the most painstaking and skillful care to a flock of brooder chicks during the first three weeks of their lives and then by three hours of neglect under just the right combination of unfavorable conditions may ruin the whole lot. Mistreat a colt or a calf for a week and it is quite pos-

sible to repair the damage. Mistreat a growing chick for a week and the chances are in favor of having made a runt of it for life. In its rapid growing period there are no stops for the repair of damages.

It is the purpose of this brief bulletin to point out some of the essentials for growth of chicks.

#### Water.

Perhaps one can scarcely over-estimate the value of a constant supply of fresh clean water to the growth of the chick. By actual analysis water makes up a little over one-half of the body of the chick. Moreover, it serves the following purposes in the chick's ration:

1. To soften the food in the crop.
2. To dilute concentrated food.
3. To carry nourishment throughout the body.
4. To aid in digestion and assimilation of food.
5. To carry waste out of the system.
6. To regulate the temperature of the body.

Under-feeding stunts less than lack of water in warm weather. Dirty, stale or stagnant water of disease ideal and speedy carrier of disease germs and poisons throughout the entire system of chick. In view of these facts, and in view of the price of water, can one afford to stint the supply?

#### Muscle and Frame Builders

It would have been easily possible to have considerably increased the weight of the college chicks at the end of the third week by the feeding of a ration richer in fats, but it would have been hard indeed, to have produced a firmer muscled, closer feathered, better framed lot of chicks.

It is worthy of emphasis that the rich ration does not force growth. It rather retards it by clogging the system and bringing on loss of appetite, inactivity and digestive disorders.

Some foods supplying protein and ash in form available for muscle and bone building during the first three weeks of chick life are: Cracked wheat, bread crumbs, wheat bran, rolled oats (breakfast food form, but fed uncooked), steel cut oat meal, milk, beef scrap, granulated bone, green cut clover or alfalfa.

A good growing ration for the first three weeks of a chick's life may be made up as follows: Of cracked wheat or bread crumbs and rolled or steel cut oats, feed equal parts by weight. With every ten pounds of bran mix one pound of beef scrap and one pound of granulated bone for the first mash to be fed dry after the eighth day. Chicks may eat an excess of bran, which is rather bulky for the nourishment it contains. Use judgment in not letting them keep their crops crammed uncomfortably full of dry bran mash all day long. Note that the beef scrap should be sifted through a screen (fly-size) and only the finer portion used for the youngest chicks. Also not that the granulated bone is pretty nearly a necessity for closely yarded chicks, carrying, as it does, about 25 per cent of protein and 50 per cent of lime. Furthermore, it contains 24 per cent of phosphoric acid, and we are coming to believe the phosphates play an important part in digestion, and hence nutrition.

Of sweet or sour milk feed all the chicks will drink from the first day, but it is preferable to use it always sweet or always sour for the same

lot of chicks. One should guard most carefully against the spilling of the milk on the ground or in the straw litter where it can ferment and become a source of danger, and also against the chicks smearing the milk upon their heads and breasts, or getting it into their eyes, where it will cause inflammation.

Good results are obtained by using hard boiled eggs with very young chicks, yet it requires skill in the doing. The inexperienced grower is safer to omit hard boiled eggs, cracked corn and corn meal from the ration until the end of the tenth day, or better the fourteenth, when danger of bowel trouble is largely past.

#### Untainted Foods

Of the chicks that are killed by spoiled foods, and their number is large, most die from eating fertile eggs tested out of incubators, poor grade beef scrap, decaying vegetation, mouldy or musty corn products, wilted green food, mould in the straw litter on their brooder floor or in the rotted straw of some old manure pile in which they scratch.

Of eggs tested out from incubators, all fertile eggs should be discarded, and all non-fertile eggs to be used in feeding chicks immediately boiled. They will then keep in a dry, cool place for ten days or more. Only the highest grade beef scrap should be used for growing chicks. In any case, never feed poultry beef scrap that has lumped in the sack.

Unless stored in a dry place, cracked corn and corn meal readily absorb dampness and mould results. Any cracked corn showing bluish discoloration or any corn meal con-

(Continued on page 15)

# FIRST IMPRESSIONS

In music or any study you take up are the lasting ones---they should be correctly imparted by an authority on the subject in hand

## STUDY PIANO

yourself or have the children study it. Distance from musical centers is no barrier---the mails have fixed that so that we can reach the most remote points easily.

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VOLUME XII.

LEHI, UTAH, SATURDAY, JUNE 3, 1916

No. 44

## School-Home Projects

J. C. Hogenson, State Leader.

For a number of years Universities and Colleges have been doing extension work in a number of subjects, particularly agriculture and home economics. Practically all of this work, however, has been devoted to the conveying of information direct to the adults who have not been in attendance at the schools. Today it is not enough that the colleges and universities do this extension work, but the idea has also become crystalized into our public schools so that a special effort is demanded today of every teacher to reach every home within the patronizing area of his school.

More and more we are learning to appreciate the fact that a school to perform its functions properly must extend its campus, its schoolroom and play ground to every person living within its district. The school-day no longer begins at nine o'clock and ends at four.

The common schools are responding to this new and enlarging idea of service, and this response is finding its outlet in efforts to connect the school work directly with what we sometimes call real life—that is, the life that is loved by men and women and children in the home. So the public schools have their extension functions which they can perform just as effectively as can the universities and colleges, and this can best be done through the School-Home Projects or what has been called Boys and Girls club work, this can be made most efficient for usefulness and educational guidance by local supervision through the summer vacation.

The men and women who are engaged as leaders of field agents in connection with the boys and girls work understand their job is clearly an extension proposition, and that the greatest aim of the work is to help the teachers to offer methods and furnish helpful agencies by which the subjects of agriculture and home economics, as taught in the schoolroom, may be translated into good practice upon the farm and in the home, and that the School-Home Project work offers without a question of doubt the best extension agency for the working out of these subjects which has yet been devised.

It is no wonder, then, that the teachers, county superintendents and school men in general are enthusiastically supporting this type of work.

The School-Home Project work is a line of training and extension work offering, in definite form, a definite

line of action to the public schools to become instrumental in carrying the benefits of the higher institutions of learning and the United States Department of Agriculture with their well equipped laboratories out to the people in all the school districts and to assist the young people to translate the theory of text books, the experiments of the laboratory and the instructions of books, circulars and bulletins into terms of action on the farm, in the garden, and in the home.

School-Home Project work to be constructive and successful must have:

1. A practical plan of industrial training that contemplates a demonstration of good farm and home practices and should show a net profit on the investment of time, money and energy for every member. In this

county superintendent of schools, the parents and the teachers of the county, explaining the potato-club work as a home project interest and as an extension service of the public school definitely connected with the problems of agriculture and home economics. During this campaign meetings are held in school houses for the purpose of explaining the movement and enrolling the members ranging in age from 10 to 20 inclusive.

This is followed by local meetings once a month at the school house to discuss the problems of interest related to the project. The public school teacher or some locally appointed leader will serve as the main-spring of this movement, to keep up that interest and direct the activities. If possible, these meetings should be

home-made potato starch, and then, by furnishing them recipes they are taught how to use this starch for practical purposes in the home. They are taught now to select and care for the seed, how to treat for scab, and how to keep a complete cost of accounting of the receipts and expenses as well as a general constructive observation of the season's work.

**Some Objects of School-Home Work.**

1. To offer to the young people careful guidance or industrial training in agriculture and home economics and thus lead eventually to a better type of American farmer and home builder.

2. To demonstrate through the work of boys and girls what is right in farm and home practices.

3. To offer a definite plan of extension work to the common schools in all of the direct interests of agricultural and home economics, and to have this extension service supported eventually by paid leaders or specialists, who will offer their services to the teachers in the general conduct of the School-Home project work.

4. To demonstrate the best method of elimination of the wastes of food products or orchard, field, garden and home.

5. To offer to the available leaders an opportunity for large social service work in the conservation of boys and girls in their home life as well as the conservation of American agriculture.

6. To teach efficiency habits of industry, economy, and thrift by giving them instruction and definite direction on how to earn a dollar as well as how to

use it, as a result of their own investment of time, money and energy.

**School Credit for School-Home Work.**

It is urged that as far as possible the superintendents and teachers in charge of the school systems of city, county and state will arrange to reward real achievement in project work by giving recognition by means of credits to all who enter, follow instructions, keep a complete record, and show a net profit on investment for the season's work. This can be done in several ways:

1. By grading the project crop report and the written essay on "How I Made My Crop," presented by members, and accepting this in lieu of a written examination in the work of elementary agriculture of home economics.

2. By grading the papers on a basis

(Continued on page 7)



Bees are a profitable side line on many farms.

way every member becomes a prize winner and the entire community will be instructed and benefitted by the project demonstration.

2. Well prepared leaders are necessary, whose duties are to inspire, organize, instruct and direct the project activities at all times of the year.

3. A carefully prepared system of "follow-up" instruction for each project and transmitted at a seasonable time and in small installments during the year.

The scope of the project work can be very nicely illustrated by the following outline of the activities of the Potato Clubs as carried on in a large number of states in the North, Central and West.

In the first place a campaign of enrollment and organization is taken up by the state, district or county leaders in co-operation with the

held during the daytime, Friday or Saturday afternoon.

All the members in the project will receive from time to time, from the College of Agriculture, through the extension division, a system of follow-up instruction, sent through the mail in small installments, covering the entire season, from the preparation of the seed bed to the marketing of the products, or the use of the products on the home table.

In addition to studying the follow-up instructions, field meetings and personal visits from leaders should characterize the other phases of the follow-up work required for success in the project. Members are taught through these agencies not only how to grow the crop but how to grade, crate, store and market the fresh products, manufacture the small potatoes, culls and peelings into



## DAIRYING

### THE NECESSITY OF THE PURE BRED DAIRY SIRE

By Edwin Brickert.

It was my intention to head my article with the name of "The Value of the Pure Bred Dairy Sire," but a second thought told me that with every livestock breeder who was really making any progress or accomplishing anything worthy of consideration, the pure bred sire is nothing less than an absolute necessity. There is no variety of livestock breeding which necessitates a pure bred sire any more than the breeding of the dairy cow. To breed a dairy cow of the highest type and standard requires more skill and headwork than any other animal that is bred today. Yet how very many of us neglect this, a very important element.

Some people maintain that the herd bull is half the herd; but I say and can prove that he is more than half. But suppose he is only half, suppose again you have twenty cows in your herd. Did you pay twenty times as much for your bull as you did each average cow? Were you twenty times as particular in the selection of this sire as each cow? That is did you think twenty times as long about each detail and did you give him the same time and attention in selecting that you did the twenty cows?

If not you did not value him as half your herd. When a certain cow shows a defect which we do not like, her calves are very liable to inherit this and show up the same way, and this only one-twentieth of our herd will be apt to have this defect apparent. But when our bull shows a defect every one of our coming generation will be liable to show this very same trait.

Scientists have proven, as well as other people that in the bovine family, the swine and poultry world and even to the human family that the sire transmits his strong qualities through his daughters and the dam bestows hers on her sons. This shows that to breed the right kind of cows we must have the right kind of a sire.

The writer attended a Jersey sale a short time ago where a yearling heifer sold at auction for \$835.00. As soon as she was sold the previous owner arose and said that he would sell this heifers mother for the small

sum of \$35.00. She was young, in perfectly good health, sound as a dollar in calf to the same bull her daughter that sold for \$835.00 was sired by and yet he offered her for \$35.00. This was to show that the sire of the heifer had done it all.

Another time I was sent to buy a heifer for a millionaire friend of mine that he had fallen in love with and I called myself lucky when I secured her for \$1500.00.

She was a beautiful heifer, a regular dream, at the same time I bought this heifers dam for \$150.00. She was also young, sound and healthy and a good cow. These are two illustrations of the value of a pure bred sire. In these two instances the sire was responsible for the extra value on the offspring.

A good way of judging a dairy sire, is by comparing his daughters with their dams. If they are not as good as their mothers, he is unworthy to be at the head of your herd.

For many people cling to the dollars too tight for their own benefit in buying their herd bull. They forget that he can increase a probable excess of value of from \$10 to \$50 on each calf he sires over a mongrel bull, even from the poorest common cow. Figuring with the minimum excess profit of \$10 on a herd of only twenty is a profit of \$200 in one year, made by having a good bull. Yet there are a great many dairymen milking twice twenty cows who would not think of giving \$200 for a herd bull for the use of him all his life.

The Jersey bulls in the world that have sold for \$1,000 and over, not excepting the few that have sold for \$10,000 and over have made more good dollars for their owners than any cheap bulls ever did. I defy any one to show me a man that ever lost any money on a good bull, who had any cows to use him on.

This state of Utah is a great state. To the dairyman, a wonderful state with splendid opportunities. In the past few years the dairy business has made very rapid strides. There is no way this can be aided to a greater extent than by the use of pure bred dairy sires.

My advise to anyone buying a dairy sire is to forget the price asked and buy the bull. If you deem him unworthy of entering your herd or if you believe him incapable of sireing daughters better than their dams, don't give a \$10 bill for him.

But if on the other hand you have all indications of a great sire in a bull and you have twenty or more cows, no matter how common they may be, two hundred dollars is cheap for a bull. A person will skimp along on the bull question, trying to save a few dollars on the purchase of his sire, and forget all about the difference in value in each calf between the offspring of the good bull and the inferior one.

The writer once owned two imported Jersey Bulls. The first he bought for \$465.00, that was good, but better yet he bought another for \$1500. Two years after the purchase of these sires he had a dispersal sale. Thirty one daughters of the first full, under one year old averaged \$105. Twenty six daughters of the second bull averaged \$230. All were from about the

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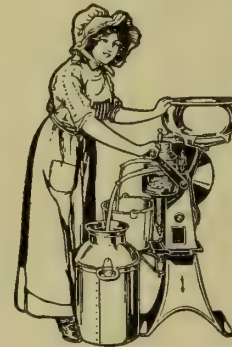
EXACTLY THE SAME DIFFERENCES EXIST, ON A SMALLER scale, in the use of farm separators. Owing to the fact, however, that most farm users do not keep as accurate records as the creameryman, or test their skim-milk with the Babcock tester, they do not appreciate just what the difference between a good and a poor separator means to them in dollars and cents.

NOW IF YOU WERE IN NEED OF LEGAL ADVICE, YOU WOULD go to a lawyer. If you were sick you would consult a doctor. If you had the toothache you would call on a dentist. Why? Because these men are all specialists in their line, and you rely upon their judgment and skill.

WHEN IT COMES TO BUYING A SEPARATOR WHY NOT profit by the experience of the creameryman which qualifies him to advise you correctly? He *knows* which separator will give you the best service and be the most economical for you to buy. That's why 98 per cent of the world's creameries and milk dealers use the De Laval exclusively.

THERE CAN BE NO BETTER RECOMMENDATION for the De Laval than the fact that the men who make the separation of milk a business use the De Laval to the practical exclusion of all other makes of cream separators.

Your local De Laval agent will be glad to let you try a De Laval for yourself on your own place. If you don't know the nearest De Laval agency simply write the nearest main office, as below.



**DE LAVAL DAIRY SUPPLY CO.**

SAN FRANCISCO

SEATTLE

50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER

same kind of cows. Twenty-six of the best calves selling for \$3,250 more than the twenty-six of the other bulls calves, yet they were good. This was before they were even one year old. Did it pay to buy the \$1500 bull?

To be sure the average Utah dairyman can not buy \$1500 bulls, but my object is to impress upon you the value of getting as good as you can.

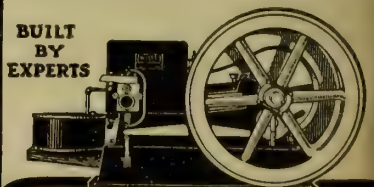
Should you ask the question. How much can I afford to pay for a bull? My answer would be in these words. "Buy the best and breed them better." Buy the best you can possibly afford even if you have to borrow the money.

The bull will get his prevailing qualities from his dam. Therefore before buying a bull, get acquainted with his dam. When you look at her you will see the kind of daughters her son is liable to produce. When you read her large record, you will see the kind

## DOWN AGAIN GO WITTE PRICES

2 H-P, \$29.95; 3 H-P, \$47.85; 4 H-P, \$64.75;  
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You can't buy so good an engine at the same price. You can't buy a better engine at double the price. Lower fuel expense. Simple in construction. Easily started. 30 to 50 per cent surplus power. 90 day trial offer. Sold direct, factory to user. Established 1870. Write for free book, "How to Judge Engines," and for price list of all sizes and styles, kerosene, Gasoline, Distillate, Naphtha and Gas. ED. H. WITTE, WITTE ENGINE WORKS, 3068 Oakland Avenue, Kansas City, Mo. 3068 Empire Bldg., Pittsburgh, Pa.





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SEPARATORS  
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My 250-page free catalog tells you why I sell direct to user, at wholesale, these and other implements, built in my own factories at Waterloo, at prices one-third to one-half less than you usually pay for first-class goods. All sizes, styles and prices of separators, engines and spreaders. My Farmobile (tractor) has no equal for simplicity and efficiency. State what you need. 250,000 customers testify to quality of the Galloway line of goods. Write today for your free copy of this wonderful book of bargains for farm and household.

**Engines \$26.75 up**  
**Separators \$64.75 up**

WM. GALLOWAY, Pres.  
WM. GALLOWAY CO.  
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Waterloo, Iowa.

**\$34.50**  
**\$995**

## A Saddle for \$36 Cash


Our latest Swell Fork Saddle, 14 inch swell front 25-inch wool lined skirt, 3-inch stirrup leather, ¾ rig, made of best oak leather, guaranteed for ten years; beef hide covered, solid steel fork.



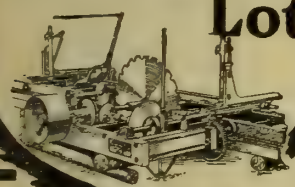
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Send your name for our 1915 catalogue, now ready.

The Celebrated Mueller Saddle



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There is good money in those trees on the wood lot. Do you know how to get it? All you need is an "American" Saw Mill which you can run with the farm engine to cut that standing timber into first class lumber. It is easy money with an "American" Mill, which cuts more lumber with less power and at less cost than any other. Your neighbor has timber, too. Cut it for him with your "American" Mill. You will both make money that way. "Making Money Off the Wood Lot" is a book which tells you all about lumber cutting. We want you to have a copy. Ask us for it. Write

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**Landes & Company**  
Salt Lake City, Utah

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CHEAPER TO FEED NO FISHY FLAVOR

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Utah Big Type Poland China Hogs. Fall and Spring Boars, a few gilts. Best blood and breeding, real big type. Write or come and see them.

H. G. JOHNSON  
East Garland Utah

of records the daughters of her son will make. In fact she is the keynote of the future prosperity of her son.

Never buy a bull from a cow without a known record of production.

Known and sworn to by disinterested parties and you are to be sure of what you get. Not only for your own personal satisfaction, but some day you may want to sell some of his bulls progeny and you can do so to a good deal better advantage by showing your customers the record of his dam.

Besides wanting the dam tested, you want as many tested cows in the bulls pedigree as possible. Numerous tests way back seven or eight generations, do not do us much good but put your tests as near the front as possible. Get both grandams tested if possible and also the great-grandams. If any of the bulls in your pedigree have tested daughters that helps that much. Study the pedigree and the more good butter records, by persons in authority, the more your bull is worth.

Another hint! Always buy from a reliable breeder. Don't buy from a trader or a breeder that is dishonest. There are a great many breeders now that substitute pedigrees too often. A trader never has anything good. He only has what the breeder don't want. But buy from a breeder that is reliable and when he signs the pedigree you know that signature is straight. If you are contemplating making a purchase from a man you don't know, quietly inquire as to the value of his word. It will hurt nothing and you are safe.

Get the sire from a good dam as this is the important element to success in dairying, Utah's greatest future industry.

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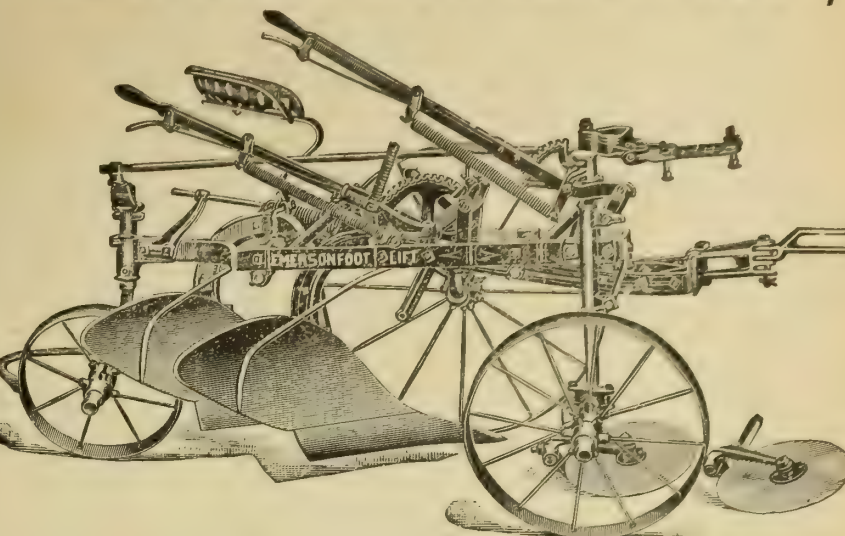
### SUMMER FEEDING FOR MILK PRODUCTION

The most critical seasons of the year to maintain economical milk production are early spring, before the cows are turned out on pasture, and midsummer. The skilled herds-men who have made a careful study of the situation claim that there is a greater loss in the flow of milk at this time than during the winter months when grain feeding is practiced.

During the summer months in most sections of the state, when other farm work is most pressing, there is a dry period of several weeks usually beginning about the middle of July and ending at the time of the rainy season in September or October. At this time pastures become short and insufficient to maintain a high level of milk production. In some cases the milk flow will decline from fifty to seventy-five per cent and when the fall pastures are ready, it is a very difficult and expensive process to bring the milk flow back to its normal.

It often happens that the dairyman is not prepared for this period, and now is the time of the year to plan for such emergencies. It is possible to keep up the milk flow by heavy grain feeding, but this seems unnecessarily expensive. There are two other systems that may be practiced more advantageously. One is a modified soiling system and the other is the summer silo. In the soiling system a succession of green crops is grown, which is cut daily, or in case of some crops, every two or three days, hauled and fed to the cattle in the barn or pasture. In irrigated sections, this seems to be practical, as it is a com-

# Emerson Foot-Lift Plow



### The Emerson Foot-Lift Plow

Both levers on the Emerson Foot-Lift Plow are on the right hand side. The powerful high left foot-lift enables the operator to take the Plow from the hardest ground and with the opposite motion push it into the ground. The feet operate the plow leaving the hands free to manage the team. The frame is very strong. The dust proof oil tight wheel bearings insure a light draft and long life, one greasing will do fully 50 acres of plowing. If you are interested in plowing write today for our catalog.

## MILLER-CAHOON COMPANY

Murray, Utah Idaho Falls, Idaho

## Grade Up Your Dairy Herd

By buying **THE BEST BRED BULL IN UTAH** from **THE BEST COW IN UTAH**.

Our county agent tested over 100 cows and this was his best giving:

**8,782 POUNDS MILK**  
**447 POUNDS FAT**  
**AND 5.1 WAS HER TEST.**

She also made **\$85.00 NET PROFIT** for her **OWNER IN TEN MONTHS** from milk alone. Entire pedigree of this great yearling bull is filled with the best butter tests that can be found in the east.

**PRICE WITHIN REACH OF EVERY UTAH FARMER**

Write for price and photo of dam to  
**EDWIN BRICKERT**

Beaver Utah

paratively simple matter to grow a succession of green crops. The crops that may be used for such purposes are alfalfa, clover, corn, peas, and oats. The chief objection to this procedure is the labor involved.

The plan that is most practical, that does not involve much labor and at the same time, is inexpensive, is that which includes silage or the summer silo. No one questions the value of corn silage for feeding all kinds of live-stock for winter feeding. It is of the same value for summer feeding. In any section where this midsummer drought exists, the farmer should build his silo large enough to enable him to feed during the entire year or build two smaller silos, one of which may be utilized during the summer. Except on the surface, there will be but little silage spoil.

At the Idaho Experiment Station during the summer of 1915, the supply of corn silage was exhausted in May. In July a field of peas and oats was cut for silage and served to tide the herd over the summer, with but a slight decline in milk. It was relished by the cattle. Alfalfa, some cereal crop, or wheat and vetch, may be utilized in like manner.—E. V. Ellington, Idaho A. C.

— 0 —

Water the calf often. He will not be so liable to gorge himself with milk if you do.





Combined with the  
Deseret Farmer and Rocky Mountain Farming  
Established 1904

Entered as second-class matter in the postoffice at  
Lehi, Utah.

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LEHI, UTAH.

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#### OFFICES

All mail should be addressed to the Utah Farmer  
Lehi, Utah Kirkham Building.  
Our office at Salt Lake City, Utah,  
is at 417 McIntyre Building.



New York Office 5th Ave. Bldg.  
S. E. LEITH, Mgr.

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#### OFFICIAL ORGAN

Utah Horticultural Society, Utah State Dairymen's Association, Utah State Bee Keepers' Association, Bear River Valley Farmers' Protective and Commercial Association, Agricultural College Extension Department and Utah State Fair Association, Utah-Idaho Millers' and Grain Dealers' Association, Utah Fruit Growers Association.

#### OUR GUARANTEE

We guarantee every subscriber against loss thru dishonesty or attempted swindle by any advertiser in this publication. We do not attempt, however, to adjust trifling differences between the subscribers and honest responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within thirty days from date of the transaction, and the subscriber must have mentioned Utah Farmer when writing the advertiser.

**Advertising Rates**—The advertising rates will be sent upon application.

There are many acres of good, fertile land, on farms throughout our state, that should be under cultivation. Wasted land along the ditch bank, along the fences, and between the trees. To neglect this land is a loss, and the little leaks eat up profits. Plant the waste acres to something worth while.

Some canned products that were packed twenty-five years ago were recently analyzed by food experts and found to be in first class condition in regard to color, consistency and flavor. When canning is properly done it will keep a long time. Considering the waste of fruit and vegetables, canning should be an important factor in helping to solve the high cost of living.

One ounce of fly prevention sprinkled on all manure piles now, is worth all the swats you can swat later on in the summer. The flies haven't really got a good start yet this spring, it has been so cold. Why not get rid of the refuse about the barns and the house now, so that the fly maggots will not have an opportunity to develop.

#### ADJUSTING THE HARNESS

If the hames fit the horse and are properly adjusted there will be practically no trouble from sore necks, collar boils and galled shoulders during the summer season when horses do most of their work.

The most important part of the harness is the collar. A broad faced collar is to be preferred.

It should fit very snug, and almost tight when new. The same collar should be used on a horse from day to day.

The next item of importance is regulation of the hame string, both at the top and bottom, to fit the collar snugly. Any variations will likely pinch the neck or bruise the shoulder.

#### MORE SILOS

One sign of increasing agricultural prosperity in the intermountain country is the erection of a great many silos. Every place one goes, one sees the silo in process of construction. This of course means that more feed will be available for the dairy cows which will in turn have their production of milk increased, and as a consequence greater wealth will flow into the farming communities.

The increase in dairy products always stabilizes the agriculture of a region and insures a more permanent kind of prosperity than is found with almost any other kind of farming. The income is regular and sure and pay day is not left to the end of the year. It has many times been demonstrated that by using the silo more cows can be kept on the farm than by any other method of feeding. We are glad, therefore, to see so many silos being constructed.

#### NAMING THE FARM

Just another word about naming the farm. It would be hard to estimate the value of an appropriate name for the farmstead. More and more it is becoming a custom to give names to farms, and the aim should be to have the name mean something—to be a distinguishing mark when marketing produce.

There is no question but that a name in connection with a fruit or dairy farm which sells good produce, is a splendid asset. It is one of the modern methods of getting the consumer or purchaser accustomed to the products of a certain farm.

The successful farmer naturally advertises. He may not think he is an advertiser, but his products advertise for him, and he will want to use his farm name in connection with this advertising—a name that is readily understood, and easily remembered; a distinguishing mark to show that his farm, and his farm products are of the best quality.

#### THE WELL-BALANCED FARM

The extremist has no place on the farm. The man who wishes to prosper on the land must so organize his business that every phase of it will prosper. If he has hobbies and if he allows himself to be swayed by everchanging whims, a lack of prosperity is sure to follow. It is the well-balanced farm, conducted on conservative lines, that will pay.

Profits in farming are not usually large at best; hence, the farmer should make use of every available resource. He should arrange to have something coming in every day of the year. The farm should include a sufficient number of enterprises to enable the farmer to employ himself, his hired help, and his horses profitably the year round.

With the improper organization, the returns may be satisfactory during part of the year, but during the rest of the time the profits may be consumed by idle horses and current running

expenses. The method of organizing and balancing the farm business probably has more to do with success than any other single factor.

#### LISTEN! MR. FARMER

We have been trying for a long time to convince a number of manufacturers and dealers that if they advertised, you would buy their products. Look over each issue of the paper and see what there is advertised that interests you.

Write the manufacturer at once, ask for catalogue and the name of the nearest dealer. You ought to do this for your own good. You can learn something about new and up-to-date things that will be a help and labor saver on the farm or in the home, thus a profit and benefit to you.

Do this and help the Utah Farmer patronize those who advertise in the Farmer and help make it possible for us to improve and increase the size of the paper. We allow only reliable people to use our columns.

With your co-operation, we will be able to improve the paper and thus we are both benefitted.

#### SAVING THE FLOWING WELL

Perpetual motion will never be discovered simply because something cannot come from nothing. Neither can a bank deposit be drawn on continuously without eventually being used up. A tank of water will gradually run dry if more water is taken out than runs in. A body of underground water follows the same law. If it is constantly drawn off in large quantities the supply in time will run short.

Many farmers seem to think that when they get an artesian well they are at perfect liberty to let all the water run to waste. They do not seem to realize that this underground water should be conserved just the same as any other valuable asset. Large wells are opened up in the lowlands and allowed to run for years unrestrained while the water is not being used, but is water-logging the land and reducing the pressure of wells on higher land. If farmers cannot be induced by peaceful means to cap their wells when the water is not needed, legislation ought to be passed to force them to adopt this means of conservation.

#### PROMOTERS AGAIN

The other day three men came into a small town for the purpose of selling a "Champion" stallion, they were in the business for promoting companies and selling farmers stallions.

One of the local men thought it best to have some expert advice and asked the veterinarian of the Agricultural College to come and examine the stallion before they bought it. It was represented by these salesmen that it was a winner at this and that show. The truth was, that when it was examined the horse men found it to their advantage to leave town and was told that such a horse could not be sold in the state because of his many defects.

We were told not long ago of a small town that had spent \$15,200.00 for five stallions. Judging from the reports given us fully 50 per cent of half of this amount was pocketed by promoters who came to the town and organized a company selling them the horses.

We believe in community co-operative buying, believe in having pure bred stock, but we do not believe in this kind of promoting where the salesman makes half.



**SCHOOL-HOME PROJECTS**

(Continued from page 3)

of 100 per cent and accepting the grades in this report as a substitute for one of the other subjects required in the regular school course.

We consider that a boy who raises an acre of potatoes, manages a market garden and does all the work, keeps his records well and writes a story, exhibits his products, has received more training and benefits agriculturally than he would by a year's study of a text book in a class of elementary agriculture. It is not necessary, however, to accept the project work in lieu of the text book required of the course but merely as a substitute for the written examination at the close of the year.

A third plan of allowing credits on project work should be to allow a certain number of points, aggregating say 200, which would be possible for every project to win in connection with his endeavors for every season. For every 50 points won in the work allow from 1 to 5 per cent to be added to the final grades in all other related subjects undertaken for the school year.

By making it a requirement that before a boy can graduate from his grade he must finish at least one School-Home project including work recorded and an essay on how he did the work. This, of course could be done only where the work is supervised.

In one county of the state the county superintendent has divided the work of the grammar grades into so many credits, some required and some elective. Before the student can graduate from the eighth grade he must have so many credits. The School-Home Projects are among the elective credits.

Some system of this kind will not only help project work but will serve to a great advantage in interesting the boys and girls in the regular work of the school room and identifying it more closely with their home interests.

**Leadership**

The importance of a well-trained sympathetic and efficient leadership for the boys' and girls' projects is being more fully appreciated. We no longer can turn our boys and girls off "out to pasture" or over to the "absorption methods" and then blame the children and our common schools for many of the deficiencies experienced.

During the ages from 10 to 18 inclusive are the years when every child must have necessary inspiration, instruction, and sympathetic leadership, and all of this must of necessity have a direct bearing upon the child's industrial and vocational life of them will very soon be called upon to battle on the bread line of life, and it is unfair to them as well as to vocational America to neglect them until they have grown to manhood or womanhood.

You will be interested to know that at the present time forty states in the Union have state leaders devoting all of their time to this work, and three hundred and fifty-two counties have county club leaders devoting from three to twelve months time in boys' and girls' leadership.

**Co-operative Relations.**

The slogan of success in practically all lines of human endeavor is summed up in the two following expres-

sions: Our point of view, and ability to do team work.

There should be a wholesome, co-operative relation existing between all project leaders, beginning with the teacher, principal, through the county agricultural agent, county superintendent, state superintendent, state, district and other club leaders.

The School-Home Project work is promoted by the United States Department of Agriculture. There has been first to recognize the state College of Agriculture, through its Extension Division, and this state institution should in turn recognize and co-operate with the State Department of Education, State Normal schools, the county superintendents, city superintendents of schools, the county agricultural agents in the local principals and teachers. In this way a federation of influence and power in local organization and follow-up work is possible and will guarantee success to every project.

**Business Practice or Academic Interest**

The tendency of a large number of teachers in dealing with the School-Home projects is to emphasize the work as of academic importance rather than a business practice and applied to farm and home. The reason for this is very readily understood as the teacher has usually been trained to deal with the problems of the class room and the school, and the first thought is "I must try to make this work a part of my school work" rather than to plan to use the project work as a means of carrying the benefits of the school to the farm, home garden, or the kitchen.

The regular subjects of the school room and the ordinary course of study will furnish quite enough of the academic and the "bookish" to the child and it is important that the School-Home projects be allowed to serve as a connecting link between the school and home, the teacher and parent. It is distinct in a way from agricultural and domestic science education as commonly understood for the class room in that the School-Home projects try to translate theory into action and at home, where the children live, School-Home project work should be the right hand of fellowship from the home to the school, while the regular courses in agriculture and domestic sciences will serve as the right hand of fellowship from the school to the home. In like manner the special contests will connect in a sympathetic and interesting way the school playground with life's field of useful endeavor.

This relation of the School-Home Project work to the school does not necessarily mean that the teacher should be less interested in its success for there is great need in these days of a closer co-operation, more communion if you please, between the teacher and the parents, the school interests and the home interests, and we believe that this organization, if properly handled, will assist very materially in redirecting the school and furnish an opportunity for helpful co-operation between these two important institutions.

Those who are interested directly in agricultural and domestic science education should be quick to grasp the opportunity to show how easy it is to correlate the project activities and the work of the school room and how

(Continued on page 14)

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(surveyed or unsurveyed)

**WITHOUT HOMESTEADING.**

by using U. S. Government Land Scrip. We can furnish any kind of scrip at market prices. We have a few hundred acres of scrip on hand which has been "APPROVED" by the Department at Washington. Scrip comes in 40, 80 and 160 acre tracts. Prices on request.

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**ANDERSON FARM**

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Information about concrete on the farm, including details as to Silo building, will be furnished free. Just sign coupon below and mail it to us.

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**OGDEN-UTAH**  
Please Send Me Catalogue No. 3  
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**UTAH CORRUGATED CULVERT & FLUME CO.**

Woods Cross, Utah.

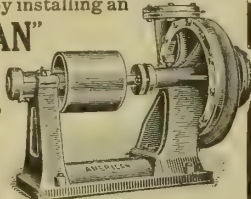


**IRRIGATE** Your Field and Garden

Get larger yields and profits. Provide fire protection for your buildings, and water for your stock by installing an

**"AMERICAN" Centrifugal PUMP**

Absolutely guaranteed. Write for new catalog.



**THE AMERICAN WELL WORKS**  
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**Here Is Another REAL BARGAIN**

160 acres of good, rich, brush land all fenced, 3-room house, and well. High water for irrigating 40 acres. Surface water at 23 feet and artesian water at 100 feet. Improvements worth \$600. All the land can be successfully dry-farmed.

Offered at the low price of \$1600. 1/2 down and balance in one year.

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**J. W. PAXMAN**  
Nephi Utah

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Samples Free

**ATTACHED INSTANTANEOUSLY**  
Name and Address. Numbered if Desired.  
**LEG BANDS for Poultry, Pigeons, Turkeys**  
**SALT LAKE STAMP CO. Salt Lake, Utah.**

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We carry a large stock of the Best Vegetable Parchment Butter Wrappers and Especially Prepared Ink for Printing the same. We furnish them Postage Prepaid at the following Prices money to accompany order.

100	.....	\$ .90
200	.....	\$1.25
500	.....	\$2.25
1000	.....	\$3.00

Send all orders to

**THE UTAH FARMER**  
LEHI, UTAH

**LIVE STOCK****MANGELS FOR LIVESTOCK**

While the mangel or stock beet would not serve as a complete diet, it does make a splendid supplement to other feeds for dairy cows, swine and sheep. Mangels are appetizing, succulent and generally relished if not fed in too great quantities or when frozen or too cold. I know of nothing that will make a greater yield per acre than this root. It is not uncommon to secure thirty-five tons to the acre, and even greater yields are possible.

The seed should be planted in a deep, rich, mellow loam and the ground should be as free from weeds as possible. Because of the necessity of potash, it is a good plan to select a piece of ground having a clay subsoil. Before plowing in the fall manure should be applied to the ground and disced in. The land should be plowed again in the spring and subsequently disced in order to make it compact. The seed should be drilled in rows far enough apart to permit cultivation. It is not advisable to plant the seed until the ground is warm and mellow. After the beets are up they should be weeded and thinned, leaving one good strong plant every eight or ten inches, thus affording an abundance of room for growth. The seed should be planted one inch deep, using about five or six pounds to the acre. In Holland and Denmark, where the mangel is used as one of the staple feeds for dairy cows, about thirty thousand plants to the acre are grown, the seeds being planted in rows close together and cultivated with a hand implement.

The beets should be pulled and topped just before the ground freezes and stored in a vault or cellar where they will not freeze.

Because of the high water content of the beets, animals will secure too much cold water if they are fed large quantities when the beets are very cold. One pound of dry matter, it being very digestible, is equal to about eight pounds of the roots and will give the same results as one pound of corn meal when fed to a milch cow. On the basis of thirty tons per acre, an acre of beets has the same feeding value as 134 bushels of corn.

Before being fed to cattle, the beets should be ground or chopped fine, but when fed to sheep they should be cut into pieces an inch or an inch and a half in diameter. It is a good plan to mix the pulp with finely cut alfalfa hay and permit it to stand twelve hours before being fed.

The mangel, in addition to being a splendid substitute for corn, when fed in conjunction with clover and alfalfa hay gives the animal a change which is always relished.

**PREVENT BLOAT IN CATTLE**

BY CARE

Bloat is due to indigestion causing fermentation in the paunch of the cow, so the change from dry hay to fresh forage should be made gradually. At first the cattle should be allowed to remain on green feed but a short time, and the usual quantities of dry hay and fodder should be fed before pasturing. It is considered dangerous to turn cattle on rank, green feed when the weather is muggy, and the air is moisture laden and

charged with electricity.

Equal parts of salt and slaked lime placed where cattle can have free access to it, is recommended as being likely to reduce the chances of bloat. During the season of danger from bloat it is well to visit the herd at pasture frequently during the day so that instant help may be given.

Two ounces of turpentine administered in a quart of warm, new milk or in a pint of raw linseed oil, is good for a bloated cow, and if necessary, may be repeated in an hour. When all signs of bloat have disappeared, a physic should be given, providing no oil has been previously administered to the cow.

**EARMARKING SMALL STOCK**

In most flocks of sheep, especially of pure bred animals, it is advisable to use some system of flock numbers aside from the registry number. It is easy for an ear tag to be lost out, but a good system of ear notches serves as in identification at all times.

The system used at the Colorado Agricultural College is one which can be recommended for small flocks. One notch in the base of the lower part of the left ear 1; two notches at the same place represent 2; one notch in the upper part of the left ear 3; one notch in the lower and one in the upper part, 4; and one notch in the point of the left ear 5; one in the point and one in the base, 6; one at the point and two on the base, 7; one on the point and one in the upper part 8; one in the point, one in the base and one in the upper part 9. The right ear represents the tens, number ten occupying the same position as number one on the left ear. In breeding ewes certain markings such as holes in the middle of the ear can be used to designate the year of birth.

The system is only applicable to the small flocks of about a hundred sheep. If one wishes to mark a larger flock, there is a more complicated system by which sheep numbering up to ten thousand may be ear marked. It is not commonly used. These systems can also be applied in the marking of cattle or hogs.

Keeping the cold out of the stables by excluding all fresh air is endangering the health of stock. Fresh air, without cold drafts, is what is desired, though it is some trouble to secure such conditions.

Buy a boar of some reliable breeder who has been working for years to get the correct shape of a pig and who is prepared to furnish the shape you desire.

Feed the pig all he can eat without squealing. This can be done only by watching him eat and knowing just how much he needs.

Experiments have shown that the greatest gains in fattening are made by young stock when two to four months old.

In swine breeding we must consider the shape of hog the nearest market demands.

**EVERY JUNK PILE**

Tells a story—and it is often tragic.

Millions of Dollars worth of farm machinery finds its way into the melting pot, because it was never introduced to good oil and grease.

You are not satisfied with the results you are getting from the castor machine or harvester oil you are now using.

You should KNOW and USE

**Oil and Grease**

We guarantee them to last five times as long as any oil or axle grease on the market.

Write for liberal Free sample—Post paid.

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**CALKO DIP**

(STANDARDIZED)

AN

**INSECTICIDE & DISINFECTANT FOR CATTLE SHEEP HOGS POULTRY AND**

To be used for disinfecting barns, chicken coops, corrals, hog pens, out-houses and etc.

**One Gallon Calko Dip Makes**

From 50 to 100 gallons disinfectant.  
45c qt.—75c half gal.—\$1.25 gal.  
Delivered

**Calko Hog Powders**

IS A

**HOG CONDITIONER AND WORM EXPELLER**

Don't feed Worms.  
Save your Hogs.

—25 lb. sack (delivered) \$2.00  
—50 lb. sack (delivered) \$3.50  
freight

**CALLISTER-KORTH CO.**

McIntyre Bldg., Salt Lake City, Ut.

When you answer the advertisements in this paper tell them you saw it in the Utah Farmer. Always buy advertised goods.



**HAVE YOUR SEED TESTED**

Dr. Ira D. Cardiff.

Inferior seed costs the farmers millions annually.

Inferior seed may cause loss in two ways:—

First—It may be of low viability, thus one, in buying seed, pays for something he does not get or gets only in part, or second—it may contain impurities.

**Noxious Weed Seeds**

Few farmers realize how many weed seeds there may be in a sample of seed which is relatively pure, i. e., pure enough to pass legal standards. The law requires alfalfa to be 96 per cent pure. Suppose the impurities in alfalfa which is 96 per cent pure consist of 2 per cent inert matter, which is of little consequence, 1 per cent green foxtail and 1 per cent dodder seed. There are approximately 400,000 green foxtail seeds and a million dodder seeds in a pound, which would mean 4,000 seeds of green foxtail and 10,000 seeds of dodder in each pound of this alfalfa seed. Sowing 10 pounds of alfalfa per acre would mean 40,000 seeds of green foxtail and 100,000 seeds of dodder on each acre, or approximately 8 foxtail seeds and 20 dodder seeds to each square yard of ground.

To sow such seed is a crime against yourself, your neighbors, and the agriculture of the state.

**Weeds**

Use the food materials of the soil which should go to the crop.

Exhaust the soil moisture.

Shade and crowd the cultivated plants.

Many of them produce poisons in the soil and many others harbor disease producing fungi.

**Weeds**

Cut down the yield and lower the quality of the crop.

Therefore, the farmer cannot afford to deliberately sow weed seed at the rate of fifty or a hundred thousand seeds per acre, or in any amount.

Buy only the best seed obtainable.

The low-priced seed is often the most expensive.

Buy pour seed subject to test. It will cost nothing to have it tested.

Pure seed, like pure bred stock, is one of the farmer's greatest assets.

**HOW MUCH SHALL WE IRRIGATE?**

To irrigate properly requires time. It is also a costly operation. By using an excessive amount of water, the cost of extra water, together with the labor of irrigation, does not always increase the crop sufficiently to justify the expense.

Many irrigators are under the impression that, as the amount of water applied to the crop is increased, in a like proportion the crop yield is increased. In other words, if one acre-foot of water will produce 25 bushels of wheat, 2 acre-feet should be capable of producing approximately 50 bushels. No grain crop will produce in the same rate as the water is supplied; in fact, water applied beyond a certain limit has a tendency to decrease the yield rather than to increase it.

If you have several kinds of rough feed on hand it will be a good plan to mix them up in feeding. Stock like a change of feed as well as you do, and if their breakfast can be of one kind and their supper of another, so much the better.

## Improve your time this summer by acquiring a practical education



(VIEW OF SHORTHAND DEPARTMENT)

Attend a school with a national reputation that holds five worlds records.

School in session all summer and new students may enroll at any time.

Positions guaranteed to all graduates.

Write for full information

## HENAGER'S BUSINESS COLLEGE

SALT LAKE CITY

**WATER SUPPLY ON****THE FARM**

Right living today demand attention to this necessity.

Water, which, next to air, is the most necessary thing in the world, probably is more necessary to the convenience of the farmer than a man in any other profession. Farmers long have realized that it is necessary to the horse's welfare to curry him, thus removing the perspiration that he may rest better and be in condition for the next day's work.

This has been too often neglected in the case of the man, not the curcomb, but the generous care that would make him stronger for each succeeding day. Also it probably has been realized that a curcomb is cheaper than a bath room and fixtures. However, the difference of price is not now such a barrier as it has been in the past. The man who is in partnership with nature today is rapidly becoming able financially to enjoy many of the comforts which he has long desired and deserved.

The time is also rapidly passing when it is necessary that the housewife carry water from a distance for her house work. The old and convenient house of a few rooms has been discarded for the larger houses, which has increased the work of the women in direct proportion. There is perhaps no place about the farm where a convenient, clean and abundant supply of water is so necessary as in the

house. It is conducive to cleanliness, comfort, and by its help the necessary work of the household is done without the excessively long hour that have been necessary in the past, and in many instances are still necessary. In fact, it has been invariably true in the development of all civilization that the increase of the use of water in the household has been in direct proportion to the rise of the standard of life.

The water supply is the principal basis of sanitary living. The supply should be constant, inexhaustible and independent of rains, drouths or surface conditions. In order that it shall not be affected by surface conditions it is necessary that the well be so located that it will not act as an outlet to surface drainage. Also it must be deep enough so that the water entering it shall have been thoroughly filtered and cleansed from impurities it may have contained.

In practically every instance where artesian water of considerable pressure is not available the storage tank is one of the most important and inexpensive fixtures of water supply. This is practically the only way in which the problem of rural water supply differs from that in the city. In rural communities it is impossible to operate in this respect. Therefore, it would seem that the development of a cheap, durable and efficient pressure tank would help to remove the greatest barrier to the supplying of the

## That Good Taste

Certainly fruit that is canned at home tastes just right—and it's always economy to can fruit. Every housewife realizes that the place of home-canned fruit on the family diet list can only be taken by some food that is more expensive—while the food value of both the fruit and sugar is greater in proportion to the cost.

### CAN FRUIT AT HOME

universally needed rural water systems.

We need pasteurized swill barrels as well as pasteurized milk in the hog lot.

Y. M. & Y. L. M. I. A.

Rates to Salt Lake City via Salt Lake Route. Tickets on sale Nephi and Tintic and East June 7th to 11th inclusive. All other points June 6th to 10th inclusive. Return June 16th





For Greatest Satisfaction Use  
**DOUBLE SERVICE**  
**Automobile Tires**  
Guaranteed 7,000 Miles Service  
**Absolutely Punctureproof**

Double Service Tires are made double the thickness of the best standard make tires.

This 100% greater wearing surface naturally gives them much more mileage and service. The average of 12 miles of tough fabric and one inch surface tread rubber makes these tires absolutely punctureproof.

These tires excel all others for use in the country over rough and rugged roads as well as on hard pavements. They are as easy riding and resilient as any other pneumatic tire—the air space and pressure being the same.

They are the most economical and "care free" tires made and are used where tires must be depended on and tire troubles cannot be tolerated. Many Double Service style tires are in use in the U. S. government and European War service. Our output is limited to a certain amount, but for a short time we offer the following reduced special prices as an introductory offer:

**PRICES**

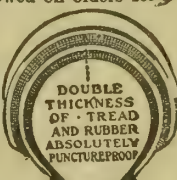
Tires Tubes		Tires Tubes	
30x3 in.	\$ 8.60 \$2.30	36x4 in.	\$17.45 \$4.65
30x3 1/2 in.	10.55 3.10	36x4 1/2 in.	21.20 5.60
32x3 1/2 in.	12.75 3.20	36x4 3/4 in.	22.50 5.75
32x4 in.	15.75 4.20	37x4 1/2 in.	23.60 6.20
34x4 in.	16.70 4.35	38x5 in.	26.50 6.50

All other sizes not included in above list also furnished. Non-skids at 10% additional.

Terms: Payment with order at above special prices, a 10% discount allowed on orders for two or more tires. All personal checks must be certified.

Try these tires now and be convinced of their very high qualities. Send direct to the consumer only. Descriptive folder upon request. Write for it.

Double Service Tire & Rubber Co., Akron, O.  
Dept.



## THE HOME

### HOT-WEATHER HELPS

Homemade Fireless Cooker, Iceless Refrigerator, and Shower Bath Add to Comfort of Farm Home.

Many homemade devices which add to the comfort of the housewife and members of the family are being made and used by women county agents in the field and by the women who are working as their demonstrators in connection with the extension work, south, of the States Relations Service. The following are especially useful during the summer months:

#### Homemade Fireless Cooker.

A wooden or tin lard pail, lined with two thicknesses of paper and provided with a close-fitting cover, may be used for the outside container of the cooker. Allow for 3 inches a packing on all sides and at the bottom of the pail. A gallon oyster can will serve very well for the nest, which should be wrapped on the outside next to the packing with asbestos and a piece of asbestos placed under the bottom to prevent the scorching of the packing when hot soapstones are used. Shredded newspaper and excelsior make a good packing. Pack this very tightly around and to the top of the nest, the top of which should be about 3 inches below the lid of the outside container. A piece of cardboard cut to fit inside the lard can with a circle cut out of the center around the top of the oyster can or nest will hide the packing and make a neat finish. Place a 3-inch cushion of unbleached muslin, stuffed tightly with excelsior, on top of the lid of the nest. When the top of the outside container is placed on and hooked down, it will be tight enough to cause a pressure. If a tin pail is used for the outside container, it may be enameled white, or a wooden pail stained brown, making a neat-looking appliance for any kitchen. Regular aluminum fireless-cooker utensils may be used for cooking the food in the nest, but any kind of a vessel with a close-fitting top and one that fits closely in the nest is suitable.

A fireless cooker similar to this, together with other labor-saving conveniences, were built and successfully demonstrated by the members of a woman's home demonstration club in Covington, Alleghany County, Va. The cost of this fireless cooker was estimated at 25 cents.

#### The Iceless Refrigerator.

A companion convenience to the fireless cooker for the hot summer days is the iceless refrigerator, or milk cooler. This consists of a wooden frame, covered with canton flannel or some similar material. It is desirable that the frame be screened, although this is not absolutely necessary. Wicks made of the same material as the covering rest in a pan of water on top of the refrigerator, allowing the water to seep down the sides. When evaporation takes place the heat is taken from the inside, with a consequent lowering of the temperature. On dry, hot days a temperature of 50 degrees can be obtained in this refrigerator. The following description will aid in the construction of this device:

Make a screened case 3 1/2 feet high with the other dimensions 12 by 15 inches. If a solid top is used, simply place the water pan on this. Otherwise fit the pan closely into the open-

ing of the top frame and support it by 1-inch cleats fastened to the inside of the frame. Place two movable shelves in the frame, 12 to 15 inches apart. Use a biscuit pan 12 inches square on the top to hold the water, and where the refrigerator is to be used indoors have the whole thing standing in a large pan to catch any drip. The pans and case may be painted white, allowed to dry, and then enameled. A covering of white canton flannel should be made to fit the frame. Have the smooth side out and button the covering on the frame with buggy or automobile curtain hooks and eyes, arranged so that the door may be opened without unfastening these hooks. This can easily be done by putting one row of hooks on the edge of the door near the latch and the other just opposite the opening with the hem on each side extended far enough to cover the crack at the edge of the door, so as to keep out the warm, outside air and retain the cooled air. This dress or covering will have to be hooked around the top edge also. Two double strips one-half the width of each side should be sewed on the top of each side and allowed to extend over about 2 1/2 or 3 inches in the pan of water. The bottom of the covering should extend to the lower edge of the case.

Place the refrigerator in a shady place where air will circulate around it freely. If buttons and buttonholes are used on the canton flannel instead of buggy hooks, the cost should not exceed 85 cents.

#### Homemade Shower Bath.

A very simple, convenient, and cheap arrangement for a homemade shower bath has been built by the Virginia club, and is considered especially useful in homes where there are many children. This device was made by using a 2 or 4 gallon tin bucket. A hole was punched in the bottom and a piece of pipe about 1 1/2 to 2 inches long soldered in the opening. A piece of rubber hose 4 to 6 feet long was attached to this and a sprayer from the watering can or a nozzle placed on the end. A rope was tied to the handle of the bucket and run through a staple which was driven in the joist beside the window sash, making a pulley by which the bucket could be raised or lowered to suit the convenience of the person taking the shower. A hook was placed below this staple so that the rope could be fastened to hold the bucket in place, and a clothespin used over the rubber tube to cut off the water. A large tin tub was placed underneath to stand in. Estimated cost of this convenience was as follows:

A 2-gallon tin bucket.....	\$ .15
Medium-sized zinc bucket .....	.75
12 feet of rope.....	.07
Nozzle and rubber tubing.....	.65
Pulley .....	.10
Piece of piping .....	.10
Clothespin .....	.01
White paint .....	.15

Total.....\$1.93

When you answer the advertisements in this paper tell them you saw it in the Utah Farmer. Always buy advertised goods.

## Boston Garter

*Valent Grip*

YOU enjoy more comfort and do better work if your socks are held snugly by Boston Garters. They're put on or taken off in a jiffy and hold securely all day.



LISLE  
25 Cents  
SILK  
50 Cents

SOLD EVERYWHERE  
GEORGE FROST CO.  
MAKERS, BOSTON

## Beginning with the Boiler

And ending with the last brushful of paint, there is not a questionable item to be found in any engine that the Nichols & Shepard Company build. Everything is of the best.

## A GOOD TRACTION ENGINE

Is the unfailing result of this method. When we say that it IS good we are backed by the openly expressed opinion of thousands of users who know in every detail what a good traction engine should be.

## THE USER IS SATISFIED

That every convenience, that every economy of operation, that every safety device that is necessary or practical will be found right where it belongs on a—

## RED RIVER SPECIAL ENGINE

Five sizes and sixteen variations are built, ranging from 13-40 to 30-98 H. P. Wood, coal or straw may be used for fuel, the engine may be had in single or double cylinder, the mounting may be center or rear. No matter what your needs may be for agricultural traction power we make an engine that will fill the bill.

Send for a copy of the Home Edition of the Red River Special paper. You will find that someone in your immediate vicinity has tried with success a Nichols & Shepard Co. traction engine on every kind of work that a tractor can do. They have been pleased with the results and have written us to tell just how well it performed. There is a lot of experience condensed in these letters that may be useful to you. Ask for a Big Catalog at the same time. It illustrates and describes the power that will haul the mortgage off the farm.

## NICHOLS & SHEPARD CO.

(In Continuous Business Since 1848)

BUILDERS EXCLUSIVELY OF

## THRESHING MACHINERY

Red River Special Threshers, Feeders, Wind Stackers  
Steam and Oil-Gas Traction Engines

(8) BATTLE CREEK, - MICHIGAN

**RAT CURE**  
TABLETS  
ONLY RATS WILL EAT  
TRY BEFORE YOU PAY  
KILLS 4 RATS FOR 1 CENT  
MORISRITHE MFG. CO., Dr. F. BLOOMFIELD, N. J., U.S.A.

## DAISY FLY KILLER



placed anywhere, attracts and kills all flies. Neat, clean, ornamental, convenient, cheap. Lasts all season. Can't spill or tip over, will not soil or injure anything. Guaranteed effective. Of all dealers or sent prepaid for 20c. HATFIELD & SONS, 1150 De Kalb Ave., Brooklyn, N. Y.

## SEND US YOUR KODAK FILMS

We Develop Any Size Roll 10¢  
We Develop Any Size Film Pack 20¢  
Prints Made From Only Good Negatives  
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KODAK HEADQUARTERS

131 MAIN ST. OPPOSITE KEARNS BLDG. SALT LAKE CITY



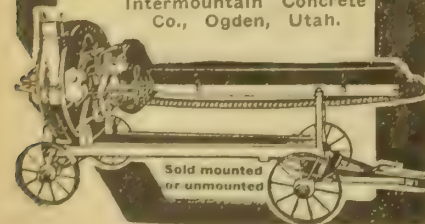
## Be thinking now of next Silo filling

The farmer with a big, broad smile these days, is the one who was ready just last fall to hustle his corn into the silo on a minute's notice, and wasn't worrying about getting it there, either, because he had a

## BLIZZARD Ensilage Cutter

The Blizzard is the tried and true cutter for the farmer. Simple, easy to run, safe. Small engine runs it. Big cutting capacity and unlimited elevating capacity. Self-feed table saves one man. Steady as a clock. Many in use after fourteen and fifteen years. Repair expense very small.

Come in—get a catalog and let's talk over the Blizzard  
Intermountain Concrete Co., Ogden, Utah.





## RELIABLE FARM BARGAINS.

190 Acres in Cache Valley. Water right for 50 acres. 40 acres of pasture balance all first-class dry farm land. Short distance to railroad station and schools. Price \$130 per acre. Will consider exchange on this place.

880 Acres, cattle ranch, near Richmond, Cache Valley, Utah, 40 head of stock, and all necessary machinery with which to run the place. House, good barn and other out-buildings. If you are looking for a small cattle ranch close in, where you will get good range and right near one of the nicest towns in the State, this will surely appeal to you. We are offering this place for \$13,800, or will consider an exchange in or near Salt Lake City.

100 Acres all under high state of cultivation near Elwood, in the Bear River Valley, at \$115.00 per acre, 10 per cent down, with 10 years to pay at 6 per cent interest.

1 Acre on 16th South and 9th East, with water and lights passing the place. \$500.00 on very easy terms.

We exchange farms for city property.

Phone Wasatch 963.

KIMBALL and RICHARDS  
"Land Merchants"

56-58 Main Street  
Salt Lake City, Utah.

## HOME SANITATION

Mrs. W. N. Short.

"An ounce of prevention is worth a pound of 'cure' is an old saying of Poor Richard's but it is as true today in the twentieth century as it was in the seventeenth. In fact, it seems to me that it contains the modern theory of all our laws of health, of sanitation, and of medicine. This doctrine of prevention is being preached today all over this broad land of ours, and the people everywhere are beginning to be converted to its teaching. We are striving not so much to learn how to cure grip, typhoid fever and tuberculosis and spending our time and money on wonderful cure-alls that never cure, but we are striving to learn just how to prevent grip, typhoid fever, tuberculosis, etc. Much has been done along this line in the past few years with the promise of much more yet to come.

This idea of keeping well and healthy is not only necessary to our physical well-being, but to our mental and moral natures as well. "A sane mind is a sane body" is an old saying too plain to need explanation. Too, students of sociology are pointing out to us today that many men, women and children are considered criminals and break our laws who need only medical treatment, rest, and fresh air. When they are physically well, then they become law abiding citizens. This theory is receiving great attention in juvenile courts in large cities and much good has been accomplished there.

In order to obtain perfect health and prevent disease we all recognize that the home, where we spend 365 days in the year, is the place to make sanitary and keep it so. In thinking over this subject, it seems to me there are three agencies which must war against constantly if we keep our home clean and sanitary—these are (1) dampness, (2) darkness and (3) dirt.

The first, dampness, brings up the subject of drainage, which is a most important one. Our houses must be built on a high place with the water draining away instead of toward them. This water must not be allowed to stand in ponds or pools, which soon become stagnant and breeding places for mosquitoes, flies, and millions of other insects that carry on the deadly work of scattering the germs of malaria, typhoid fever, dysentery and many other diseases. Of course, ample provision must be made for the drainage of the cellar. It must be lined, sides as well as floor, with stone or brick covered with a thick layer of concrete. The odors and gasses arising from a damp cellar are deadly, hence, the walls and floor must be as nearly impervious to water as possible.

The second point is that of darkness, which includes the subjects of ventilation. The house must be provided with large and numerous windows that the fresh air may enter and replace the foul air. We all know of the poisonous carbon which is given off at our every breath and that every person must be provided with pure fresh air full of oxygen. If not, we become tired, listless and sick. Not only must the pure air be allowed to enter our houses at all times but also the sunlight. The deadly germs are cowards and seek the darkest corners for their abode—



the  
undisputed  
LEADER

A publication of large general circulation in California recently asked its subscribers, among other questions: "What brand of cocoa or chocolate do you use?" In the answers received ten brands were mentioned, Ghirardelli's being named in more than 60% of the total. The reason must be Ghirardelli's undisputed superiority. Order

## GHIRARDELLI'S GROUND CHOCOLATE

In ½-lb., 1-lb. and 3-lb. hermetically sealed cans.  
There's a double economy in buying the 3-lb. can.

D. GHIRARDELLI CO.

San Francisco

Since 1852

## A Product of Exceptional Merit

Do you know that Utah-Idaho Sugar has set the standard of sugar perfection? That nowhere in the world is there produced a better sugar? Claims have been made concerning the relative merits of home sugar and that produced abroad, but scientists have been unable to detect any difference.

Doesn't it seem reasonable to you that if there was any difference, it would be in favor of home sugar, produced here under ideal conditions, in the best climate, with the best of raw material, by healthy, skillful people, in sunlit, pure-air factories?

Now, tell your grocer which sugar you prefer. Tell him to be sure you get—

UTAH-IDAHO SUGAR  
ABSOLUTELY PURE

OPENED JAN. 1ST, 1913



"The HOTEL that's BEST  
In all the WEST"

WHEN IN LOS ANGELES  
STOP at the NEW  
FIRE PROOF  
**HOTEL NORTHERN**  
EUROPEAN  
200 OUTSIDE ROOMS  
150 WITH BATH  
420 W. 2ND ST. NEAR HILL  
NORTHERN HOTEL CO., PROP.  
FRANK L. CRAMPTON, MGR.  
RATES \$1.00 PER DAY AND UP.  
CAFE  
IN CONNECTION

nothing is so effective to rout them out as the direct rays of the sun. Then, too, our houses must be ventilated not only during the day but also at night. It is a mistaken notion that the "night air" as it is commonly called, is dangerous to our health,

as if the Lord would furnish pure air for us to breathe during the day and impure air for the night. Let us have fresh air and more of it, morning, noon, and night.

The third point is that of dirt. This would require volumes to tell of all



of its forms and dangers. I know from experience that it takes the most of any housekeeper's time and energy to even partially eliminate it. It requires constant watchfulness on our part added to a lavish use of fresh air and water. The most important point under the subject of dirt is the disposal of waste. We know that filth or waste matter of any kind should not be allowed to accumulate in any place. If so, it begins to decay and decompose, and what before was only a harmless bit of something, now become rank poison, giving off deadly odors and gases. Especially is this true of any filth allowed to stand in the cellar, for here the surroundings are usually most favorable for its causing disease.

I have read somewhere that some of the most poisonous gases resulting from the decomposition of organic matter in the absence of light and of a sufficient supply of oxygen have very slight odor, so we can not always depend on our sense of smell to warn us that something is wrong about the premises. We must be up and doing, constantly on the look out for trouble.

The question of the slop-bucket is a serious one, for as long as the farmers raise hogs (and we hope they always will) we must save every drop of the precious slop and every scrap to help the pigs grow into fine hogs. It is sure to be an unsightly and bad smelling object although a very necessary one. However, if it be

emptied often, rinsed out and kept covered, conditions are made better.

As for all waste that will burn, I find the stove a good solution of this trouble. Instead of allowing things to lie around and gather dust and breed moths, if they cannot be made into something useful, then I consider the fire the proper place for them. I know my reputation along this line among the members of my own family is something "fierce" and whenever an article is missed, although its usefulness may have ended years ago, "mother" is always accused of having "put it in the stove," and I am frank to say that mother is usually guilty.

In spite of the old-fashioned notion to the contrary, I consider that the building of bath rooms, lavatories and sinks in the house to receive and carry off all waste matter, is the only sanitary solution of the problem. In the house, these matters will be kept well regulated and repaired and not be neglected, as is usually the custom out of doors. The system of sewerage must be the best and plenty of pure clean water must be on hand at all times.

I have not tried to deal with this subject scientifically but simply to state a few facts gathered from my own experience along these lines. There is yet much to be said and yet it is encouraging to know that farmers are more generally becoming interested and convinced of the necessity of home sanitation.

## Diversity In Fruit Growing

By Prof. C. I. Lewis, Corvallis, Oregon.

(Divided into three installments. This is the first one)

We have recently completed a study of the cost of production of apples in a thousand orchards in the Pacific Northwest. In making this study, we gave special attention to the subject of possibilities of diversifying the fruit grower's interest. We realize that the production problem simmers itself down quite largely to the proper utilization of labor and teams and the maintenance of an acreage which guarantees cheap production.

The amount of diversification that a man can undertake depends very largely upon the acreage of fruit which he maintains and the amount of capital, time and general facilities at his disposal for other lines of endeavor. Possibly, the best form of diversification for the fruit grower is to diversify more in his own line. Namely, instead of devoting his entire attention to the production of one type of fruit, such as apples or walnuts, it would be better that he grow a number of types, thus distributing his labor and bringing in cash incomes at various seasons, and eliminating to a certain degree the possibility of lean years. For example, in the Willamette Valley, if he has a prune evaporator, black cap raspberries or loganberries, prunes and English walnuts could all be dried in the same building and would not interfere with each other. For the slack time which would come in August, he could have Bartlett pears raised for the cannery, or he could take such a combination as berries, prunes, apples or walnuts. In a section like Hood River one could grow such crops as strawberries, can fruits, cherries, pears and apples. For The Dalles, early berries, cherries, peaches, apricots green prunes, grapes

and some truck garden crops; for the Freewater, Milton district, dewberries, strawberries, early garden truck crops, peaches, green prunes and apples. These are merely some of the crops to raise. Others could be raised, and we could work them out for different sections of the Northwest.

To the fruit grower who contemplates taking up general agriculture in connection with fruit growing, I would warn him against overdoing this proposition, for, unless he makes a careful study of the proposition and is a good business man, he will only lose money, rather than add to his receipts. The great danger to a man who goes into general farming and at the same time attempts to production of fruit is that his fruit will be of very poor quality. Often Western people point to the diversity of certain Eastern fruit growers, but they fail to remember that these same Eastern fruit growers produce very ordinary fruit—fruit that would not pay a Western fruit grower to pay the freight on. It is very doubtful if, on high priced land, there is a single agricultural production that will pay better than fruit properly grown, and the man contemplating diversification needs to give a little attention to the question of cheap production and efficient business management. On the other hand, the general farmer should go into fruit growing cautiously. There are some exceptions, however. The prune, for example, can be grown very nicely by the every-day farmer and is today the best cash crop on a large percentage of the farms in the Willamette and Umpqua valleys.

The loganberry is another crop which the dairyman or general farmer



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OIL**

**1/2  
AS MUCH  
TIME**

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oven does half its cook-  
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Give your roast a few minutes  
of quick heat, then pull a  
damper and turn out the  
burners. Dinner cooks  
itself, without  
watching.

**NEW  
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OIL COOK STOVES**

**NEW PERFECTIO OIL COOKSTOVES** are now serving 2,000,000 homes. Sold in 1, 2, 3, and 4 burner sizes at hardware, furniture, and general stores everywhere.

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Mention Utah Farmer when you write.

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No matter how small the job all concrete should be thoroughly mixed. The old method of shoveling is tiresome from a physical standpoint and is very unsatisfactory for consistent mixing.



Our foot, steam or gasoline power mixers will solve the problem for you. Made in several sizes and endorsed by all who have used them. Made in Utah.

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American Building 338 So. Main St.  
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Let us figure with you on that new house and barn. We ship direct from the mill saving you the middlemans profit.

If you wish to save money and want quality lumber try us.

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Fine Cabinet Work

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Splendid cattle ranch, 280 acres, plenty of free range, timber and water. All fenced, good buildings. Puts up 150 tons of hay. Located 150 miles from Ogden. Price only \$5500.

**FEDERAL LAND COMPANY**

Ogden Utah

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## Automobile OIL



A GOOD time to pay proper attention to the lubrication of your car is right now—no matter whether it is a new or an old auto. There is a little booklet sent free on request by the Utah Oil Refining Company that tells you which consistency of VICO Automobile Oil will meet the particular requirements of your car. Phone, call or write for it today.

**Utah Oil Refining Co.**  
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**"EVERY  
DROP  
COUNTS"**



## To San Diego and San Francisco

VIA LOS ANGELES  
and rail or steamer

**\$40.** TO SAN DIEGO  
or SAN FRANCISCO

and return  
ON SALE DAILY beginning  
MAY 1st.

Liberal Limits and Stopovers  
BEAUTIFUL SAN DIEGO  
EXPOSITION

OPEN ALL YEAR

J. H. Manderfield A. G. P. A.  
10 E., 3rd South St.  
Salt Lake City, Utah.



can grow in connection with other crops, and the English walnut offers a fair field. Occasionally we find a man handling peaches and canning pears successfully, but there are very few general farmers who make a success of apples, pears and sweet berries.

Every orchardist should attempt to produce as large a percentage as possible of food consumed on his ranch. This means he should keep a good family cow, at least one pig, a small flock of chickens, and should maintain a good garden, in which will be found abundant supplies of asparagus, rhubarb, small fruits, potatoes and seasonable vegetables. From such a combination he ought to be able to sell a considerable excess to advantage.

We will now consider the various opportunities for diversification and the first we will consider is that of forage crops in irrigated sections. For example, clover and alfalfa, and similar crops, can be easily grown in the mature orchards. Our survey, however, points out that when these crops are produced as hay very little money can be made, and that most money from these crops is realized when they can be pastured by such animals as hogs or sheep.

Sections fortunately situated near good markets can engage to a limited extent in the production of high grade truck garden crops. However, the market is limited and it is only occasionally where one can realize money under conditions where it is necessary to employ practically all the hand labor.

For irrigated districts, the strawberry has shown itself to be the best money producer. We must admit that sometimes it is a little hard on the trees, but there are many fruit growing sections that would be better off if they always reserved a portion of their land for the production of such fruits as the strawberry.

The potato on the whole has not been very profitable. Occasionally an orchardist makes money, but more of them lose. In only a small proportion of the orchards do we have the right combination of soil and climate for good potato production. A few growers producing seed potatoes have made money. Some of the men in the Grande Ronde Valley have done well in this way.

It is very rarely that grain or grain hay can be grown profitably among fruit trees. The greatest value of the grain would be to check over vigorous trees that are not bearing, but which should be producing commercial crops.

### LOW RATES TO SALT LAKE CITY

Account Y. M. & Y. L. M. I. A. Tickets on sale at all Utah stations. Nephi and Tintic and East. June 7th to 11th. Other points June 6th to 10th inclusive. Return June 16th via Salt Lake Route. adv.

A pretty young woman tripped up to the counter where a new clerk was sorting music and in her sweetest tones asked: "Have you 'Kissed Me in the Moonlight'?"

The clerk turned around, looked at her, and answered:

"It must have been the man at the other counter, I've only been here a week."

Regularity of feeding and work make long lived horses.

## Flags of All Nations FREE With Royal Bread

With every large size, 10c loaf of Royal Table Queen Bread, we pack a highly polished celluloid flag of some nation. There are seventy nations represented in all. These flags have made a big "hit" with the young folks. No matter where you live, your grocer can supply you with.



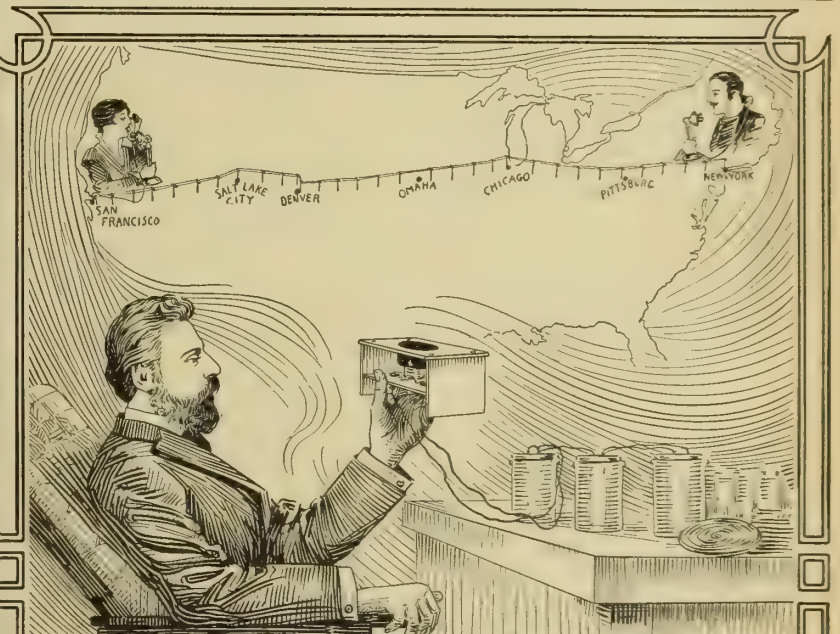
## ROYAL TABLE QUEEN

"The Perfect Bread"

When you have saved 35 coupons which are attached to the flags, you will receive a special prize FREE, either "The Game of Nations" or a large Felt Pennant.

Royal Table Queen is economical to use; cheaper than home-made bread when you figure the cost of ingredients, fuel, failures, and say nothing about labor. The family never fails to appreciate the extra goodness and quality of this perfect bread.

**Royal Baking Co., Salt Lake City, Utah**



### TELEPHONE STANDARDS

Forty years ago Alexander Graham Bell succeeded in transmitting the sound of the human voice over a wire; and while men scoffed at the invention and laughed the inventor to scorn Bell's imagination even then pictured the telephone in universal use.

His was the master mind that penetrated the future and visualized an ideal—One System, One Policy, Universal Service.

Since then time has developed certain standards—standards of plant construction, standards of equipment, standards of service efficiency.

Standards of our duty to the public have existed from the beginning of time; for they are founded on principles of equal justice and fair dealing. This means that our service must be as nearly perfect as human skill and ingenuity can make it, and that our rates must be fair, equitable, and as low as a fair return upon investment will permit.

It means courteous consideration of the public's needs, and solving the problems growing out of such needs in the light of the best engineering and other expert skill which the art of telephony has developed.

Such a policy commends itself to public favor, public respect and public confidence, without which no public utility can long exist.

**The Mountain States Telephone and Telegraph Company**



**SCHOOL HOME PROJECTS**

(Continued from page 7)

this project work will eventually put life into the exercises of class, laboratory and experiment.

In the past the schools and the homes have been almost entirely separate and distinct. It is only when the school work connects closely with the life and work of the home that the school is performing its function best. It then brings the school and the home together and ties together the book learning of the one and the doing useful things of the other.

I believe that every student ten years of age and over should be required to take a course in School Home projects as part of his regular school course, so as to balance up early in life the practical and the theoretical. In order to properly carry out this plan, the Agricultural and Home Economics teachers in the public schools should be employed on the 12 months basis so that the summer months can be spent out in the fields, the gardens, the barnyards and the homes of the boys and girls. No other school activity opens so wide a field for the profitable and agreeable combination of study with doing as does this practical work.

**High School Projects.**

In the High Schools of the state the Agricultural clubs are becoming organized for a definite useful purpose. Wherever it is desired, the work which these clubs do is outlined and partly supervised by the Agricultural College through co-operating with the County superintendent, the principal and the teachers.

It has been thought best for this coming year to concentrate the efforts of these clubs to two lines of work; the Feeding and Cow Testing, and Seed Selection Projects. Help will be given the schools where these projects are taken up by furnishing literature; personal visits during the year by seed experts, dairy experts and club leaders. Where this work is supervised the Agricultural College will give credit for work done. Many of the High Schools are taking advantage of this. Briefly these projects are as follows:

**Grade Project Work**

During the year just closing the boys and girls of the grades in the state of Utah have produced in their club work a total wealth aggregating \$60,000.00. The 310 boys who reported their potato project work averaged a yield of 440 bushels to the acre. The average for the state for the last ten years is 140 bushels. The 310 boys beat the average by 300 bushels to the acre. If 310 boys in the state can do this, cannot the average farmer also do it? The boys will show them how to do it. What would it mean to the state if every potato grower were to grow 440 bushels instead of 140 bushels? It would certainly add greatly to the wealth of our state. Our boys also have raised excellent poultry and hogs, have secured splendid yields of sugar beets, mangel wurzels and garden vegetables, while the girls have vied with their mothers in making bread, raising flowers, sewing, and in the canning of fruits and vegetables. In practically every case the parents have had to work hard to break even with the boys and girls. In this work for the coming year the efforts of the State leaders will be devoted to securing a closer co-oper-

ation with the school authorities and in helping the local and county supervisors in making a success of the work in their respective districts. Heretofore the efforts of the state leaders have been scattered all over the state, mostly when the work has been unsupervised. The time for concentration, however, has come, so this coming year most of the time and energy of the state leaders will be devoted to the counties and districts employing local, district and county leaders. The projects promoted this year are poultry, crop and pig, potatoes, sugar beets and mangels, and farm handicrafts.

I am of the firm opinion, and many of the leading educators of our state have expressed themselves to me as being of the same opinion, that the time is not far distant when this Club of School-Home Project work will be placed regularly in the school curriculum and become a required part of the work just the same as reading, writing, and arithmetic. It will be part of the required work in agriculture and Home Economics to complete at least one School-Home project during the year.

Education, if it means anything today, means the training of the man and woman of tomorrow to fit into life with interest, efficiency and contentment. I recommend to the favorable consideration of this body of educators the School-Home work as a means of effectual industrial training in agriculture and home economics. It has possibilities adapted, if you please, to every sort of climate, people and school conditions and I believe it to be one of the most constructive lines of industrial extension work in which the public schools can engage.

If we are interested today in the training of the whole child and in bringing the school and the home in a closer and more sympathetic relation, and in clothing this important institution with power to add effectively to the proverbial three R's say the things that constitute health and human efficiency, you will say with us that anything that will help the public schools to train equally well the head, the heart, the hands, and the health of the child is not only worthy of our consideration but should have our enthusiastic support and faithful endeavor as leaders and teachers of America's future citizenship.

The great question with the teachers is: How can my school be of the greatest service to the community? How can my school help best to prepare the pupils for life? Gentlemen: I know of no better way than of requiring each pupil to take up and complete at least one School-Home Project particularly adapted to the community and to his or her needs.

**W'CHA MEAN?**

Two small boys were having a somewhat rough struggle just outside of the Chase factory and when one received an unexpectedly hard blow he exclaimed: "If you don't look out you'll end up in a place that begins with 'h' and ends with 'l'!" President Chase, who was passing, on hearing the remark, scolded the boy severely for what he said. "Well," replied the boy, after a pause, "I'm sure I don't know what you're talking about. I only meant 'hospital.'" Still, we're not infallible.

# A Growing Industry

## RAISING ALFALFA SEED

10,500 acres of Utah land in 1913 produced approximately 33,500 bushels of Alfalfa seed—about 3½ bushels per acre. The 1915 crop of Alfalfa seed sold last fall for an average price of \$9.60 per bushel.

### HERE IS YOUR OPPORTUNITY

A farm of 50 acres in a fertile section—soil a rich black loam—raises bumper crops of Alfalfa. Very suitable for the successful raising of Alfalfa seed.

Can be bought for less than \$4000.00 on good terms.

### PRIOR WATER RIGHT—\$1.00 PER ACRE WHEN USED

Owner has other interests which necessitate the sacrificing of this valuable farm.

**LOOK IT UP TODAY** before it is too late. See or write to

**W. C. ALBERTSON**

604 Dooly Bldg.

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## The Perfection of Union Pacific System Service

Is not a chance—it is the result of the expenditure of millions of dollars in money and the working-out of a positive plan of betterments, which has extended over a period of many years—

As a consequence, the Union Pacific System has been brought to a state of operating regularity—the effects of which are felt through every channel of the service; the work goes on from day to day, and the public is assured of the full benefits resulting therefrom—

When you buy transportation, you buy it with the same economic conservatism you would use in purchasing government bonds or other dependable securities—

In traveling, you are entitled to stability—service, and protection, for every dollar you expend—

The Union Pacific System has been termed, "The Standard Road of the West;" it is "standard" in everything the world implies.

Six trains east daily; two trains north and northwest.

**CITY TICKET OFFICE, HOTEL UTAH, SALT LAKE CITY, UTAH.**



For the Buyer

This market place offers our subscribers and readers a very good place to advertise. If you have something to sell or want to buy here is the place to tell it. These advertisements are read because they offer bargains, your bargain should be here. Take advantage of this opportunity today.

For the Seller

Gem Herd of Improved  
Chester White Swine.

This Herd Bred, Raised and Sold. Both Boar and Sow Grand Champions of the World's Fair held at Frisco this last year. Both Sire and Dam, is still in the herd. If such breeding interests you, write for illustrated catalogue. Stock of all ages for sale at all times.

Address  
**GEO. H. LAWSHE**  
Falls City Idaho

HOLSTEIN BULLS FOR SALE

Sons of Wachusetts Creamelle George the 2nd whos daughters have made from 350 to 500 pounds of butter fat a year just with ordinary care. Wachuetts was 2nd prize aged bull at the State Fair last fall and all of his get were first in their class but one. His dam gave 105 pounds of milk in a day that tested better than 4 per cent. No. 1 Iowana George 3rd a fine 18 months old son of Iowana Colanthe Alberkerk. A high testing heifer from Iowana Farms, Iowa, her dam has a 19 pound record. This young bull was Junior Champion at the State Fair. The first check for \$200 takes him. No. 2 Wachusetts Beauty a 12 month old son of Maudeline Of Beechwood Beauty with a 23 pound butter fat record, milk test 4.6. She is a full cousin to Colantha 4ths Johana, \$150 buys this one. Take no chances, get a bull from a proven sire and one that has produced the goods. Offer several others from 6 months to 1 year old from \$75 to \$125 each.

J. W. STUBBS  
Charleston Utah

BATES AND SONS  
Provo, R. F. D. No. 1.

Breeders of S. C. White Leghorns and R. I. Red fowls and Airedale Dogs.

BOURBON RED TURKEY EGGS

At rate of 3 for a \$1.00 or 10 for \$3.00. Order from this ad.

B. F. ELIASON  
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Mention Utah Farmer when you write.

UTAH HATCHED WHITE LEGHORN  
BABY CHICKS \$11.00 PER 100

Circulars, order-blanks, etc., upon request. Candee Colony Brooders carried in stock.

GLENWOOD EGG FARM

R. D. 3 Murray, Utah

40 PER CENT OFF

on eggs for hatching for balance of season and on breeding stock as long as they last.

4 BEST LAYING STRAINS  
R. C. Reds and White Wyandottes  
S. C. Black Minorcas and White Leghorns  
Stock sold on approval. Infertile eggs replaced free of charge. Now is your chance to get a Bargain. Write  
E. C. BLANPIED  
Box 60 Milford, Utah

BABY CHICKS & HATCHING EGGS

White Leghorns, Brown Leghorns, Barred Rocks, R. I. Reds, Black Minorcas, Anconas, Buff and White Orphingtons. Prices on application.

THE ORLAND HATCHERY

Orland, Glenn Co. California

ONE ACRE

Good land between 13th and 14th South for quick sales; \$425, \$10 cash, \$10 per month.

9 acres between 13th and 14th South, good for dairy or gardening. Can cut into lots later; only \$400 per acre, \$200 cash, balance easy, or might trade.

**GEO. M. DANLEY**  
Was. 2989.  
707 Walker Bank Bldg.  
Salt Lake City, Utah.

Money to Loan

On improved farms with primary water rights, at reasonable rates.

Quick Service.  
We lend our own funds.

**INTER-MOUNTAIN LIFE  
INSURANCE CO.**  
Home Office  
11th Floor Boston, Bldg.  
Salt Lake City, Utah.

A Bargain

Ideal City Home of Ten Rooms, elegantly furnished with all modern improvements and conveniences, located on paved avenue, east side residence section of Salt Lake City, for sale reasonable... For particulars, address 236 Atlas Block, Salt Lake, Utah.

Wanted to hear from owner of good ranch for sale. State cash price and description. D. F. Bush Minneapolis, Minn.

As good as new, has not had four months use, a No. 5 Oliver typewriter for sale cheap.

Address D-201 East Broadway, Salt Lake City, Utah.

FOR SALE

Three pure bred registered Percheron mares. Must sell at once. One now in foal. Price for the three \$1,000.00. Write or call on  
E. D. HATCH  
Heber Utah

When you answer advertisements, tell them you saw it in Utah Farmer.

You Take No Chances in  
Buying Durocs From Us.

We ask a fair, legitimate price for our hogs and in turn we guarantee every one that we sell.  
Your money back if you are not satisfied.

**RICHARDS LIVESTOCK CO.**  
Virginia Jesse S. Richards Mgr. Idaho  
(The West's best Durocs)

Pure Bred Unrelated  
DUROC JERSEY PIGS  
FOR SALE  
\$5.00 apiece.

**H. RONNENBERG**  
Murray R. F. D. No. 3

Do not wait until you have used the last Butter Wrapper before ordering more, because it takes time to print them.

ESSENTIALS FOR GROWTH  
OF CHICKS  
(Continued from page 2)

taining cobweb-like strings is unfit to feed growing chicks. Corn products frequently heat in the sack and therefore, all corn products and all prepared foods containing corn in any form should be carefully and frequently examined before feeding. It is further recommended that poultry men buy corn in small quantities in damp or hot weather unless facilities for handling it are such as to safeguard it from spoiling.

Variety in the Ration  
A chick will not only eat more, but will actually digest a greater percentage of what he eats of a ration which affords variety than of one composed wholly or mainly of one or two grains. Reasonable variety is accorded in the following ration, which is recommended to be fed from the third to the eighth week to growing pullets:

Grain—Equal parts of wheat, corn, and oats (rolled oats and cracked wheat to be gradually replaced by sprouted oats and whole wheat during the fourth and fifth weeks).

Mash—Five pounds bran, 3 pounds corn meal, 2 pounds wheat middlings, 2 pounds ground oats, 1 pound granulated bone and 2 pounds beef scrap, 1 oz. dairy salt.

Milk—All the chicks will drink.

Green Food—All the chicks will eat daily of any tender, juicy green stuff Grit, shell, and charcoal.

Segregation of Sexes

The young cockerels should be separated from the pullets as soon as they begin to annoy them. With light breeds this means not later than the eighth week and with heavy breeds possibly from the tenth to the twelfth week. Cockerels intended for market at from 1 to 2½ pounds of weight should be fed the same ration as the pullets up to within two weeks to one

month of marketing.

To finish off growing stock for market, increase the quantity of ground grains fed and also of protein. Range-raised birds will generally stand up under forced feeding in confinement for from ten to twenty days, but should be fed liberally of green food and watched carefully for digestive disorders meanwhile. Birds will stand up longer under forced feeding where the increased protein is given in the form of milk rather than beef scrap. A ration for finishing off growing stock for market is herewith given:

Feed three times daily, all the birds will eat in a half hour, of equal parts by weight of cornmeal, wheat middlings, ground oats and beef scrap or cottage cheese, salt to season. Use buttermilk or sour milk for moistening, to a consistency such that it can be poured. Give the birds, in addition, water and sour milk to drink, green food, grit and charcoal, but no whole grains.

Environment

Environment plays as important a part in the growth of chicks as do the feed and water provided for them. Range is of great advantage to the growing youngsters. If it offers something more than mere space, for example, growing green stuff, occasional bugs or insects, and inducement to scratch, its advantage can scarcely be over-rated. Chicks need both sunlight and shade. Except on hot days, turn the chicks out into the sunlight and open the building they live in to the germ-destroying rays of the sun. On a hot day, the most shade of growing shrubs or trees is cooler and more grateful than the shade of low buildings or canvas-covered frames. It is folly to expect growth from lousy chicks or chicks that are cooped up in vermin-infested houses.

Chicks need space to grow in. Often the poultry man fails to realize the added house room required by increased growth. A chick at twelve weeks of age is approximately twenty times the weight of a chick newly hatched. Base figures for increased housing space upon this fact. Crowded chicks are invariably checked in growth by night sweats and the impure air of their cramped quarters. In general, all those things that contribute to the comfort, contentment, and happiness of chicks play an important part in their growth.



# Specials for June

4½ Feet Four Tine Genuine Jackson Hay Forks. Regular price \$11.00. Special while they last \$6.80.

Also one 20-40 Slightly used Gas Tractor.

One Minneapolis Thresher at bargain price.

Agents for Columbian Improved Steel Grain Bins and McCormick Mowers and Binders, etc. We carry a full stock of repairs for same.

Don't place your order for twine until you get our prices. We sell the genuine McCormick sisal brand and will save you money.

## Sam Peterson & Sons Company

147 South State Street

Salt Lake City

## You're the man

who should wear

### Scowcroft's

"NEVER-RIP" OVERALLS

and

"MADERITE" WORK SHIRTS

### BECAUSE

They have greater wearing strength, more comfort and longer life than other makes—and they are UNION MADE.

You buy work clothes for comfort and service.

You get the utmost of these in

"NEVER-RIPS" and "MADERITES"

You buy satisfaction if the label says

### SCOWCROFT'S

John Scowcroft and Sons Co.

Ogden, Utah.

The Utah Work Clothes Mfgs.

## FOR A SHORT TIME ONLY---

A HANDSOME and HIGHLY PERFECTED PLAYER-PIANO  
THE FINEST EVER OFFERED AT OR NEAR THE PRICE. THE

## AEOLIAN PLAYER-PIANO

With Beautiful Music Cabinet and 30 Rolls of Music.

DELIVERED TO YOU FOR \$10  
A FIRST PAYMENT OF \$10

Balance in easy monthly payments. Price of Outfit \$460.

The Aeolian Player-Piano is entirely above the class of other player instruments advertised at low prices.

For price is not the first consideration in this instrument. It is the highly perfected and finished product of the largest manufacturers of musical instruments in the world—the concern known everywhere as the leader in fine player construction—The Aeolian Company. So quality is the first requirement in the Aeolian Player—quality worthy of the unqualified Aeolian guarantee.

Its wonderful pneumatic system, because of many patented and exclusive features, is unequalled in responsiveness, musical capability and ease of operation. A remarkable perfection is evident in every part that is a factor in securing musical excellence—for this Aeolian Player-Piano, remember, is the work of the men who have made all of the world's finest players.

The piano quality of the Aeolian Player is also very superior. The tone is rich, smooth and big in volume. The action is quick and well-balanced—delightfully satisfactory to the person who plays by hand. The tone experts who have made the famous Weber and Steck Pianos such magnificent instruments, have given their best skill to the Aeolian Player-Piano also, and have helped to make it one of the greatest triumphs of the Aeolian Organization.

The Aeolian Player-Piano is truly a quality musical instrument. It is sold at a moderate price only because science and efficiency and expert skill in Aeolian manufacturing secure economics that make low prices possible.

New upright Pianos  
from \$180 up—  
Good used uprights  
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up. Easy terms.  
Write today.

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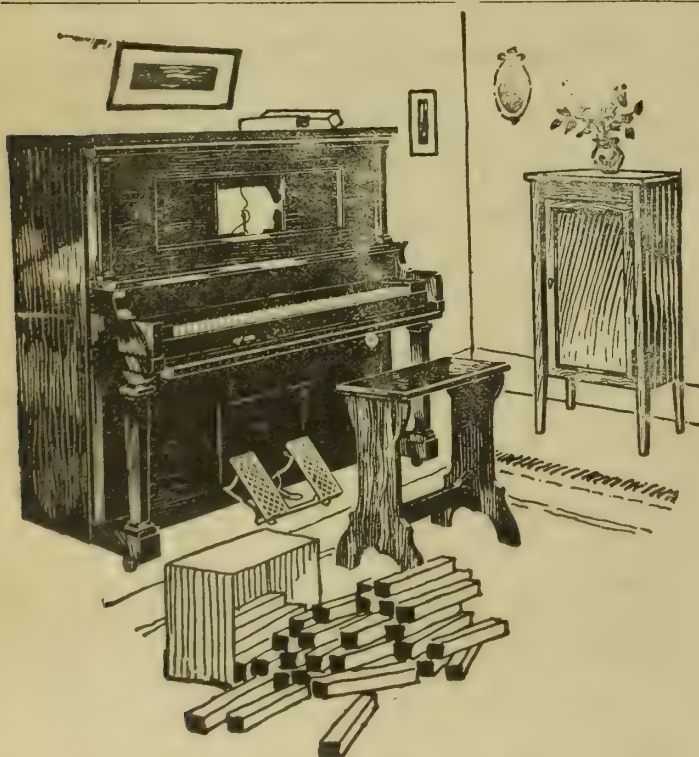
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1862

ROYAL W. DAYNES, Manager

13-19 E. FIRST SOUTH ST.

First of all Reliability—our Fifty Fourth Year.

CAPITAL  
\$300,000.



Send in This Coupon

Consolidated Music Co.  
Salt Lake, Utah.

Gentlemen:—

Send free—catalogues and information regarding your special offer on Aeolian Player-Pianos.

Name .....

Address .....

Mention the Utah Farmer, when writing.



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Ag. sec.

READING ROOM

# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region

OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE

VOLUME XII; No. 45 LEHI AND SALT LAKE CITY, UTAH JUNE 10, 1916

## The Fruit Industry

is a profitable business for many of our farmers. There has been some who have made partial failure, but where a careful study has been made of marketing, packing and growing, good returns have been obtained.

At the present time much attention is being given to the horticultural interests, with Federal and State aid and practical men working together the fruit industry should take on "new life."



## The Sheep Business

During the past few years very good returns have come to the owners of sheep. Many farmers have put a few sheep on their farms. They will nearly live on what would be ordinarily wasted on the average farm.

Like any other animal they will respond to the kind of treatment given them. Try out a few sheep, pure bred if you can get them, on your farm.



## Diversity In Fruit Growing

By Prof. C. I. Lewis, Corvallis Oregon.

Divided into three installments. This is the second one.

### Livestock in the Orchard.

When marketing conditions are right, the hog represents one of the best propositions for the fruit grower to consider. This is especially true in Western Oregon, where abundant crops of turnips, vetca, rape, etc., can be grown as winter pasturage and where the soil will stand such pasturing. The hogs are turned off in the spring. Where cheap grain, such as wheat screenings can be procured, hogs have been produced very satisfactorily by some of our orchardists. Where summer pasturage must be resorted to, the question is a little more complicated and the grower is often forced to unload his pork on a very poor market. However, in some of our experiments we have secured very satisfactory results. In a test which we tried at the Umatilla Experiment Farm, at Hermiston, the following results were secured:

### Alfalfa Pasturing Experiment.

For the purpose of determining the comparative value of alfalfa hay and pasture produced by equal areas of land planted to orchard, one-half acre of 4-year-old alfalfa was taken. The soil and stand of plants were uniform and no grading was done preparatory to seeding.

The tract was equally divided into one-fourth acre fields, one-half being set aside for the production of hay and the other fenced for pasturing.

The pasture plat was divided into two parts of one-eighth acre each. A small shelter and water barrel were placed at one end of the dividing

fence in such a manner that, by changing the free end of one panel from one end to the other of the shelter, they could be thrown into either of the plats.

Owing to the flume leading to this land being small, water could not be applied to the entire experiment at one time, but it was irrigated regularly at intervals averaging about 12 days in length. New furrows were made in the hay ground after each crop was removed, and in the pasture plats before each irrigation.

Four crops of hay were cut from one-fourth acre, which yielded as follows:

First crop, May 22.....	848 lbs.
Second crop, July 6.....	838 lbs.
Third crop, August 3.....	534 lbs.
Fourth crop, September 28.....	430 lbs.

Total ..... 2650 lbs.  
or 5.3 tons to the acre. A yield of 5.3 tons is considered large for coarse sandy soil not influenced by ground water.

The first lot of hogs purchased for use in the experiment were farrowed September 15, 1913, making them 194 days old. They were from the first litter of a young Duroc sow. The sire was of the large type Poland China and both parents were of good breeding. Hogs of the second lot were very similar in every respect to those of the first. Although not large for their age, they were thrifty and in good flesh when put on the pasture.

Results for season—Number of days, total, 190; total, 573; grain fed,

1883; average gain per day, 3.01; average gain daily per hog, .75; pounds pork per acre per day, 12.4.

Total number of days alfalfa was pastured, 190; number of hog days for one acre of alfalfa, 3040; total pounds pork produced by one-fourth acre of alfalfa, with addition of grain, equals 573, which is equivalent to 2292 pounds to the acre. At 7c this amounts to \$160.44.

After deducting \$28.25, the cost of 1883 pounds of grain (rolled barley) fed at \$30 a ton, leaves \$11.86 to the credit of one-fourth acre of alfalfa. This equals a rate of \$47.44 an acre for the alfalfa by pasturing under the above conditions, which were no more favorable than are found on several farms on the project at present time.

At \$7 a ton, which is the sale price of loose hay, an acre income of \$37.10 was received. The value of each ton of hay in terms of alfalfa used as pasture, in view of the above results, would amount to \$8.95. At \$7 a ton for hay, and \$8.95 a ton for hay when used for pasture, gives an increase in value of \$1.95 a ton, or \$7.80 an acre for pasture over that of hay. During one week in April small amounts of alfalfa were cut from an adjacent field and fed to the hogs on account of cool weather checking the growth of forage on the pasture plat. No record was kept of the quantity used, but as it was very small it would make only a slight difference in results of the experiment.

In the above figures no estimate or consideration is made of the comparative labor requirements in producing hay or pasturing. From the farmer's point of view the pasturing gives a better distribution of labor and, if somewhat more expensive in amount required, being more evenly distrib-

uted, would, on many farms, be cheaper than the irregularity and inconvenience of gathering haying crews for short periods of service.

The value of retaining the organic matter resulting from grain fed and forage produced upon this land and having it well distributed over the surface in the form of manure is an item of considerable importance in this district.

All that can be gained in buying grain in quantity is clear profit. In order that the greatest profit can be had from pasturing, grain (which is necessary for maximum returns) should be bought directly from the producer and in large quantities. Where a return of \$47.44 an acre was got for alfalfa pastured by feeding grain at \$30 a ton, a saving of \$37.68 would have been made by feeding grain at \$20 a ton, and an acre return of \$85.10 realized. From 1.5 to 2.5 pounds of grain should be fed daily for every 100 pounds of live weight. One and one-half pounds, or 1.5 per cent, was fed in this experiment.

For the comfort, health and protection of the animals, substantial shelter should be afforded and the quarters kept clean and well disinfected. Fresh water and some form of mineral matter should be kept available at all times. A combination of soft coal, or charcoal, salt and a small amount of sulphur, kept in a small trough in the lot, is valuable to keep the animals in good thrifty condition.

The grain should be fed twice a day and the animals frequently changed from one part of alfalfa to the other to keep them on succulent feed and get a maximum growth of forage. If not fed down closely, the alfalfa stubble should be clipped as soon each time as hogs are removed.

## WHEN THE LIGHTS ARE LIT---

The evenings are not half as long and uninteresting when there is music in the home.

### Why not let the young folks study music?

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VOLUME XII.

LEHI, UTAH, SATURDAY, JUNE 10, 1916

No. 45

# Handling the By-Products of the Fruit Business

Address before the Farmers' Round-Up by Leon D. Batchelor, University of California, Citrus Experiment Station, Riverside, California.

A By-Product, according to the Standard Dictionary is "an accessory product resulting from some specific process." Webster's Dictionary gives the term a broader meaning defining it as "A secondary or additional product; something produced, as in the course of manufacture in addition to the principal product."

The Dictionary of Political Economy gives the definition: "By-products may be defined as those materials which in the cultivation or manufacture of any given commodity remain over, and which possess or can be bought to possess a market value of their own."

By common usage, however, the term "by-product" has come to be used in speaking of most any of the manufactured fruit products, as the jams, jellies, canned fruit, and even evaporated fruit. This is an erroneous use of the term in many cases, and has led to a misunderstanding of its importance for frequently the products of a fruit section are spoken of as by-products simply because they are canned or preserved in some way, but are in fact the principle product and not a by-product.

The subject of fruit by-products has been given much attention during recent years, especially throughout the boxed apple section of the west. In the year 1912, when the crop of apples was heavy and prices low, the editor of "Better Fruit" saw the necessity of shipping only the high grade fruit to the eastern markets, as the low grades did not justify the expense necessary in marketing. A series of excellent articles on so-called fruit by-products was therefore published in "Better Fruit," May 1913. This publication aroused a great deal of interest, and during the National Apple Show in Spokane in the fall of 1913, the subject of by-product of the fruit industry was given an important place on the program, and a committee was appointed to make a thorough study of this side of fruit growing. This committee comprised some of the best men in the fruit growing and kindred industries of the northwestern states. This committee has worked incessantly during the past two years holding meetings from time to time and issuing reports upon the progress of its studies. In summarizing the findings thus far, the following editorial in "Better Fruit" Nov., 1915 is of interest:

"The By-products Committee has not accomplished as much as was anticipated, for which there seems to be a very good reason. After considerable investigation on the part of the By-products Committee, it wisely arrived at the conclusion that the

whole success of the fruit industry did not depend entirely on by-products or primarily upon by-products, but that the future of the fruit industry must depend, first upon the satisfactory distribution and sales of fresh fruit, and therefore most of the members of the By-product Committee realized the necessity of assisting to create a market for fresh fruits, giving most of their attention and time to that subject."

These conclusions were reached in considering a deciduous fruit industry typical of the region west of the Rocky Mountains with the exception of California. The industry in this aforementioned region made its start and established its reputation in the production of fresh fruit. The varieties of tree fruit already planted are best suited to this industry.

During the past two years there have appeared numerous articles on fruit by-products in the various horticulture journals. The writers have frequently referred to California as an example of the successful development of fruit by-products industries. In most cases this has been rather misleading, due to the loose usage of terms, for the extensive cannery and evaporating industries which have grown up in that state have been developed as the principle means of marketing the fruit. To quote the most eminent authority on the fruit industry of California; Professor Wickson (California Fruits p. 446. 1914) writes as follows:

"Fruit canning began in California over fifty years ago, but during the last three decades has attained its greatness, and is still promising much wider extension. The process is simple, and yet is attended at every point, from the purchase of the fruit, to the sale of the product, with operations which require experience, wisdom and good judgment. It will be obviously impossible to give in print a guide to the pursuit of such an industry. The principles involved in the process of commercial canning are, of course, the same as rule in the old kitchen processes, but to secure uniformity and cheapness of product a vast number of manipulations and labor-saving appliances have been devised. These begin with the manufacture of cans and attend the product to the end, and the realization of the commercial and uniform production which they assure involves the employment of large capital and the keenest business ability. The canning interest has, therefore, segregated itself more and more widely from the growing interest. Orchard canning on a small scale, which was once thought fea-

sible, has passed out of sight except as it is seen to lie in the foundations of a few of the smaller canneries which have been built upon it. It seems clear now that as a rule the fruit grower's duty to the canning interest ceases with the production of acceptable fruit unless individuals or associations can command capital enough to enter the field on equal vantage with the large commercial canneries."

In quoting the same authority (California Fruits p. 448, 1914) with reference to cured fruits, light is thrown on this rather misunderstood side of California's fruit industry. After summarizing the growth of the cured fruit industry during the past fourteen years Professor Wickson writes:

"In connection with this notable factor of our horticultural production, certain facts of its utilization and its significance should be clearly understood not only by those who actually employ it in their business, but by those who desire to properly appreciate the industrial resources of the State.

"First. Cured fruits in California are a primary and not a secondary or by-product. It is true, of course, that curing fruit does, to a limited extent, save from lost fruit which shippers and canners are not at the time paying profitable prices for, and it is true also that the recourse to curing frees growers from helpless dependence upon fresh fruit buyers. But this does not mean that curing is a way of getting something from refuse fruit, not suited for other purpose. It should be taken as evidence that, for the most part, grades of fruit which are cured are the same which are also available for shipping and canning when prices are right. It is very important in many ways to have it clearly understood that, except to an insignificant extent, California fruit drying is not undertaken to save wastes or to get something from fruit which is not suited to higher uses.

"Second. As our cured fruits are a primary and not a by-product, it becomes intelligible why such free investment is made in acres of well-made trys; in tramways and turntables for their movement from the shelter of convenient cutting or dipping and spreading houses; in capacious apartments and mechanical devices for giving the cut fruit its bath in sulphur fumes to preserve natural colors and to prevent fermentation and insect invasion; in the carefully prepared drying floors; in well-fitted packing houses. Such investment has reached millions of

dollars in the aggregate, and the standing of cured fruits as primary products is the justification of such outlay.

"Third. The provision of such equipment is not alone evidence of the standing of the industry; it constitutes an obligation upon producers to put out a product which shall be true to its opportunity as a primary product, and not merely a makeshift to prevent loss or waste. Thirty years ago California dried fruit was a makeshift, and a disgracefully poor one. As enterprise and investment proceeded it was soon seen that style and quality alone could require them. Next it was discerned that fruit for curing, to command profitable prices, must be as good as fruit for any other high purpose, as has been suggested. It was then believed that to secure handsome cured fruit which should only be relieved of its excess of water and still retain color, flavor and winning beauty, could only be produced in machine-evaporators with artificial heat, and a few years were given to invention, purchase and rejection of all such devices except as an occasional refuge when the California climate forgets itself. When the demonstration came that with proper pre-treatment California sunshine and dry air would produce notably fine evaporated fruits without houses and furnaces, cured fruits entered upon their career as primary product and planting to produce them began.

"Fourth. The obligations upon producers, to make their output worthy of such standing, extended to the whole process of growing and curing. The fruit must be well grown, and fruit for curing should have size and quality which make it first class for other purposes, with the added excellence of being somewhat more mature, because it is not required to stand hauling and shipment. It should, however, be carefully handled to escape bruising, because discolorations are blemishes. It must be cleanly cut for removal of pit or core, because trimness, neatness and shapeliness are all essential to beauty. Before it reaches exposure to the protecting fumes of sulphur must be often saved from darkening by handling in water, when the nature of the fruit is such as to require it. It must be carefully and evenly spread upon the trays, especially if it be a cut fruit, so that no interference can prevent each piece from reaching its best estate. Sulphuring must be adequate, and yet not excessive, for sulphuring is a protecting and not a resurrecting process; it is not to improve bad fruit, but to keep good fruit

(Continued on page 6)



# DAIRYING

## DAIRY COW RATIONS.

By I. D. O'Donnell.

I recently read a description of a plant which fastens itself to telephone and telegraph wires and, with no means of subsistence other than it can secure from the air, it grows and multiplies.

There is great demand for a breed of milch cows which will support themselves by some such simple process. I have known some farmers—not many, of course—who appeared to be trying to accustom their cows to such a means of livelihood.

The milch cow should be considered a manufacturing plant—nothing more or less. What you take from a cow is governed directly by what you put into the cow. It is true some cows are more efficient than others—just as manufacturing plants are more efficient than others. You need not expect large yields of milk from cows which you feed unnutritious material any more than you could expect to get grain by running thrashed straw through a separator.

The cow is so constituted that she can digest and assimilate about double the amount of food necessary to maintain her body. When the cow is furnished with all the food she can digest and assimilate, the excess over the amount utilized in maintaining her body is turned into fat or milk. A good dairy cow turns this excess into milk and a beef type cow adds fat to her body. It should be understood that the cow first utilizes all the food necessary to maintain her body before devoting any to fat or milk production. Therefore, in order to secure the maximum amount of milk, it is necessary to provide the cow with all the food she can utilize.

As fully important as quantity of food is quality of food. Any manufacturing plant turning out a product must have the raw materials in proper proportions as well as sufficient quantities. If the finished product is composed of both wood and steel, you need not expect efficiency from the factory if you furnish all wood and no steel materials nor if you furnish half enough wood and double the amount of steel necessary.

Milk is composed of certain fixed elements and the foods furnished the cow must contain protein, carbohydrates, and fats in proper proportions if the cow is to do her best work.

Those who have made a study of milk production generally agree that the proportion of these elements should be about one of protein to five and a half or six of carbohydrates and fats. It will be found that cows vary with regard to the amounts of the raw materials they require to secure good results. Some cows make more efficient use of hay than others, and the same is true of grains and more concentrated foods. These variations are particularly noticeable between the different breeds of dairy cows. The skilled dairyman discovers these variations and uses the feeds he has to the best advantage.

Pasture is an important item in dairy cow rations. In starting cows on pasture in the spring they should be allowed to graze only a few hours each day and the time of grazing may be extended gradually. The first growths of pasture are usually watery and comparatively low in nutriment. Unlimited access to this kind of pasturage is liable to disarrange the cow's digestive organs and usually a bad taste is noticeable in the milk. The grain ration should be continued for a time after the cows are started on grass and the grain gradually decreased as the pasture becomes stronger until when the pasture is at its best no grain is required for good results.

As the pasture dries up in the late summer and fall, the cows should be given a little green fodder—alfalfa, clover, or other succulent food—to prevent a let-down in the milk production and a shortening of the milking period.

As the pasturing season draws to an end the ration should be changed gradually to cured hay with silage or roots and a small allowance of grain.

On all of our irrigation projects alfalfa hay is available and this is a great boon to the dairy farmer. When good alfalfa hay is to be had there is no use in spending money for the high-priced protein feeds, such as bran, oil-cake, etc.

Some of our dairymen feed nothing but alfalfa hay during the winter months and they stoutly maintain their returns are as good as may be secured by adding silage or grain or both to the ration. Experiments have demonstrated some very fine results from alfalfa straight, but there is the important matter of continuously maintaining the cow in the best of bodily strength in and out of the milking period and enabling her to produce lustrous calves. To do this it is important that food elements not present in alfalfa hay be supplied and it is economy to round out the ration by proper portions of silage or roots and grain. This follows the idea of supplying the proper food in the proper proportion to secure the most efficient use of the cow's powers of digestion and assimilation.

A method considered good by successful dairymen is to give the cow all the alfalfa hay she will use, add 1 pound of silage, or roots, for each pound of milk produced daily, and 1 pound of grain for each 3 pounds of milk produced daily. This is, of course a full day's ration.

Use particular care in the periods of change from one ration to another. Make no sudden changes; one food

should be replaced gradually by another. And when you feed the cows smile just as you do when you do to the bank to secure a loan—the cow is more susceptible and responsive to smiles than any banker.

## SILLO EXPERIENCE

I wish to give my experience with the silo. I think every farmer ought have a silo for he will have feed for all kinds of stock and at all times and in all kinds of weather. You don't do any damage such as having fodder. I find that cattle will eat silage when they will not eat the best alfalfa hay, and I can raise better calves with ensilage and alfalfa than I can with alfalfa alone or with grain. I can get more milk from a cow fed ensilage than from one fed alfalfa. For feeding steers, it is the best feed I have ever had. I never have a steer scour nor fail to have a good appetite.

We built a silo 16x38, and have a patent roof which opens up and gives us six feet of extension so that when we fill it we have 16x44. I can fill it in one day with corn such as we had this last year, six men with racks, four men in the field, three men at the silo, and one man to cut corn. I do my own corn cutting, and as our gang or threshing crew pay each other \$2.00 per day for what help we give one another, it would cost me \$26, and for filling a silo of that size I charge \$45. That would make a total of \$71. Our silo will hold 167 tons, and when I opened it, there was only 24 inches from the top of being full of good sweet ensilage. As to spoiled ensilage, we had none, and if put up right there will not be any.

I have been feeding 48 head of fattening cattle, and 30 head of calves and milk cows, and for the last three weeks have been feeding some 70 head of stock cattle, and have enough ensilage to feed until spring. Am also feeding some to the young horses.

We put 22 acres of corn in our silo, and would like to ask how far that would have gone in the form of fodder, for that much stock, and how much waste would there have been in this much. There is no waste to the ensilage.

## THE CARE OF MILK

### IN THE HOME

Dr. W. D. Frost.

The quality of the milk when used, depends to a considerable extent upon the care it receives in the home. We are sometimes inclined to blame the milk man for troubles which are due to improper care of the milk after it has left his hands.

The housewife who is anxious to provide the family under her charge with a pure milk should choose her milk man carefully, should insist on bottle delivery and then when the milk comes to the house should put it promptly into the ice box and not allow it to stand on the porch, window sill or kitchen table. To allow the milk to stand in a warm room will hasten greatly the growth of bacteria and hence lessen the keeping qualities of the milk.

In opening the bottle, first wipe the mouth of it with a clean towel before removing the cap. Use a sharp pointed instrument to remove the cap, lift it with care and rinse it in clean running water before replacing it.

Mix the milk well before using it. Inverting the bottle rapidly two or three times will do this. Pour out only

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the amount needed for a specific purpose, and pour into clean receptacles only. Do not return any unused portion to the milk in the bottle, but place it in the ice chest in another dish.

Keep all milk containers tightly covered to prevent the entrance of dust, dirt, or other foreign matter. Do not keep more than one day's supply of milk at a time, but order a fresh supply daily.

Wash the milk bottles carefully before returning them to your milkman. In some places this is required by law. The best way to wash a milk bottle is to first rinse it out thoroughly with cold water and then carefully with very hot water. All vessels used for holding milk or cream should be cleansed in the same manner.

Milk bottles should never be used for any other purpose than holding milk or cream.

It is important to take the proper care of your ice chest. Milk will readily absorb odors and, therefore, the ice box must be kept scrupulously clean. Strong smelling foods, such as onions and cheese, must not be kept in the same compartment with milk or butter.

Milk prepared for infant feeding in nursing bottles should be kept in the ice chest until just before using. The practice of heating the baby's milk at evening and keeping it warm until night or early morning feeding is very bad. The heat thus maintained is most favorable to the growth of bacteria.

## PASTEURIZATION!!

Charming Francis Pritchard, the wonderful dancer in "The Peasant Girl," describes her experience at a club in the suburbs of Boston. The ladies were engaged in social welfare work, and the pure milk question had come up for discussion. One member remarked: "I believe we should compel all the dairymen to pasteurize all their milk."

"That can't be done," answered another, a leading official of the club. "One day last spring I went to a dairy which sells milk here and found all the cows in the barn. I asked the man why he didn't turn the cows out to pasture. He said they had no pasture so early in the spring."

"So you see, ladies, it is impossible to pasture the cows during a great part of the year and consequently we cannot have pasteurized milk all the year round."

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your money in the  
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## "Good News for Farm Women"

Dear Mrs. Dairywoman:—

Orange, N. J., March 1, 1916

The bearer of good news is always welcome; and I have some very good news for farm women. We've a new separator at our house and it's a wonder.

One splendid feature of this new invention which must have been planned with the comfort of the dairy woman in mind is the knee-high supply can. This does away with the hard, high lift no woman should be asked to endure day after day. It's only a few inches to lift and a tilt of the pail, even for a small boy. This is **one** item of good news.

Cleanliness is the beginning, middle, and end of good dairy work. You know how quickly the separator shows the effect of any slight letting up in this direction. With dishes to wash three times a day, cooking utensils, calf pails, milk pails, etc., a big pile of separator disks is just about the "last straw," isn't it? But with our new Sharples there are only three pieces to clean, not one heavy, bulky, or fussy. This is the **second** piece of good news.

Formerly, a slight slowing of speed in turning the handle of the separator meant a loss of cream—and money. One's attention had to be strictly on turning the crank at an unvarying high speed, which was trying to both mind and strength. My **third** and best piece of good news is that the

# SHARPLES

## SUCTION-FEED CREAM SEPARATOR

draws up into the bowl just the right amount of milk—always in proportion to the separating force. If you feel out of sorts, you may turn slowly and the bowl will drink up just enough milk for clean skimming and no more. If you feel spry and want to get through to sew, to trim a hat, or to visit a neighbor, turn as fast as you please and the bowl will take up proportionally more milk, yet the cream will be of the same thickness. Smooth, even cream, such as the Suction-feed gives you makes quality butter that brings top prices.

The separator has only one thing to do while you have many tasks. The separator has always been a tyrant which insisted on being turned at regulation speed, whether you were well or ill, worried or happy, rested or worn out. But this new Suction-feed Separator **meets your moods**. Its speed is your speed and yet, **it gets the cream all the time**.

Why don't you drop a postal to the Sharples people for their new book? Then, you can show your husband that this new invention will be a money saver for him as well as a labor saver for you.

Yours truly,

A Dairywoman

What this farm woman says in her letter is absolutely true. There are many other pieces of good news in our new book, "Velvet" for Dairymen, which fully describes this wonderful separator. Send for your copy today. Address Dept. 104.



The bowl is easy to wash. There are only three parts, and no disks.

# The Sharples Separator Co.

Jobbers for Utah, A. L. Brewer Dairy Supply Co., Ogden, Utah.

Also Sharples Milkers and Gasoline Engines

West Chester  
Chicago

San Francisco

Portland

Pennsylvania  
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## RELIABLE FARM BARGAINS

A mistake was made in advertising the following piece of property last week. It was advertised \$130.00 an acre instead of \$30.00.

160 Acres in Cache Valley, water right for 50 acres 40 acres pasture, balance all first-class dry farm land, short distance from railroad station and schools. Price \$30 per acre. Will consider exchange on this place. This is one of the greatest buys that ever passed through our office.

58 acres near Tremonton, Utah. Good house, barns, other outbuildings, horses, machinery, beautiful trees, water right from Bear River canal for the extremely low price of \$130.00 per acre, including everything. Easy terms with small payment down.

59 acres at Farmington, Utah. 8-room brick house, water piped into the house. Irrigation water for the farm, good family orchard, large barns and outbuildings. On the main County road \$11,000. Will consider exchange.

100 acres belonging to the Utah-Idaho Sugar Company near Elwood for sale at \$115.00 per acre. 10 years to pay at 10 per cent interest. This property is all plowed and leveled, ditches made and fenced.

We have several other beautiful farms for sale in the Bear River Valley, where the land will pay for itself.

We exchange farms for city homes.

Phone-Wasatch 963.

KIMBALL & RICHARDS  
"Land Merchants"

56 and 58 Main St.  
Salt Lake City Utah.

## Merit Will Win

We have proven this. Merit has no competition; you can't keep a worthy product down. When we started to make sugar, we were determined to make it so good that when people would think of sugar, they would immediately connect it with "Utah-Idaho."

We are asking you to try Utah-Idaho Sugar, after which we will rely on your good judgment of sugar value to continue its use.

We believe it will be but a short time before every housewife in these mountain states will be using home sugar. Don't you be the last to give it a trial. It is sure to please you. Order it by the sack; its more economical to buy it that way. Be sure to ask for

**UTAH-IDAHO SUGAR**  
ABSOLUTELY PURE

### HANDLING THE BY-PRODUCTS OF THE FRUIT BUSINESS

(Continued from page 3)

from becoming bad. The fruit must be sufficiently dried and yet not overdried, and during the process must be protected from dust by the situation and character of the ground used, even if such protection costs trouble and outlay."

The great success of California in the production of cured fruit lies chiefly in the favorable climatic conditions which prevail during the harvesting period.

There are many parts of the world where good fruit is grown, but there are very few sections where conditions producing such fruit continue to accomplish its preservation. According to the last census the valuation of California's cured and canned deciduous fruit amounted to seventy-one percent of the total valuation of deciduous fruit produced in the state. Only in regions having a sufficiently warm and dry climate, as Greece, Turkey, parts of France, Spain and California is sun curing of fruit practiced on a commercial scale. Fruit may also be cured in drying devices known as evaporators; in which case the product is known as evaporated fruit, while the sun cured fruit is usually spoken of as dried fruit. About three-fourths of the cured fruit produced in this country is sun dried and probably always will be for the only limitation to the curing is the number of acres of sunshine in the favored sections of the arid states. Drying therefore, is a more economical process of curing than evaporation.

Recently a number of patented processes for curing fruit by dehydration have been introduced. These processes give promise for the betterment of the industry. The principle involved is the same as that in evaporation although the process is quite different. The dehydration process is practical with a greater variety of fruits and vegetables and the product can be more nearly restored to its normal condition in its preparation for the table.

The second great fruit canning and curing state is New York, and a brief consideration of apple evaporation in this state may be of interest at this time. This industry approaches more nearly the by-product side of the fruit business than most fruit preserving industries. In writing on this subject, Mr. D. W. Seely, ("Better Fruit," May 1913, p. 36) of Sodus Point, Wayne Co., New York, writes as follows:

"In all apple-growing sections there should be evaporators to take care of the second-class fruit, not leaving them to rot on the ground and a total loss to the grower. In some cases the evaporated apples bring as much as the first quality of barrel or possibly boxed apples, but this is not the rule. Until recent years in Wayne County, New York, practically everything was dried, and this made a very fine grade of evaporated fruit which commended a big price, and still does. Many growers evaporate all their apples and claim there is more money in it for them, and this is getting to be the general opinion of everybody in this section of New York. One is not so inconvenienced with the labor problem."

It is interesting to note further in Mr. Seely's discussion that the growers actually received for their crop during the year 1912, from 30c

to 35c per hundred. The apples evaporated down to about 13 pounds per hundred on the average and sold for six cents per pound. In speaking of an evaporator with a ninety bushel daily capacity the same authority quotes the following interesting figures:

Cost of 90 bu. of apples.....	\$15.00
Cost of evaporation including labor, fuel, sulphur and overseeing .....	\$12.00
Total.....	\$27.00

575 pounds of evaporated apples @ 6c	}	37.08
About 280 lbs. of waste @ 95 percent		

Net profit in handling 90 bu. apples (not considering taxes, depreciation and interest on dryer) one day's run.....\$10.00

Under the assumption of a plant of this size being owned by a non-profit co-operative association the growers would have received 27.8c per bu. for their apples, instead of about 16.5c per bu. or \$6.60 per ton selling to the evaporator. The investment on such an evaporator in Wayne County, New York, amounted to about \$500. The capacity equalled 3500—5000 bu. per season. Therefore the difference between the growers selling to an evaporator or owning their own plant (11.3c per bu.) would amount to from \$395 to \$565 during one season or about enough to build the evaporator. This throws some interesting light on the value of grower's co-operative associations as well as interesting figures on apple evaporating. All of the above figures are based on a wholesale price of 6c for the evaporated product and are quoted from the observation of one man describing a single evaporator among the many in the above county. The writer is not aware of any summarization of the operative costs in a large number of factories, the above account, however, was written as typical of the largest evaporated apple area in the United States. Again, wholesale prices fluctuate both above and below the rate (6c per lb.) heretofore mentioned. At present the highest grades of evaporated apples are quoted from 6½c to 7½c per pound in the San Francisco markets while last summer the figures fell to about 5c per pound.

In considering further the prices realized for apples sold to the evaporators in New York State, Mr. H. B. Miller, ("Better Fruit" p. 9, Nov. 1914) Director of Portland School of Commerce, writes as follows:

"Reports from New York show that in 1900 the apple growers received fifteen cents per bushel for apples that went to evaporators, or about \$6 cents per bushel, or approximately \$14 per ton. In 1902 and 1903 they received approximately \$10 per ton. The latest reports from New York show that in a ten-year average growers received for apples that went jointly to evaporators and vinegar plants \$10 per ton. New York is the greatest of all apple-producing districts and produces more dried apples for export than any other state, and if this section of the country is to compete with them in the foreign markets,

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Perhaps the drying and canning of apples in the Watsonville district of California could also be considered somewhat in the line of a by-product enterprise. However, Mrs. Jerome, (Fruit and Produce Marketer, Jan. 6, 1916, p. 8) the president of the Watsonville distributors writes that "about forty percent of the 5000 cars which comprised this year's crop, went to the dryer." The secondary product of the region having nearly overtaken the principal product in importance.

It should be observed here that the grades of fruit acceptable for curing do not correspond to the so-called culls of the mountain states region, but approach more nearly "C" and Fancy grades. Taking apples as an example such fruit as that which has been shipped in bags or loose to southern cotton states would be the lowest grades fit for curing. Partly decayed, wormy and badly bruised apples are unsatisfactory for the purpose, making only the low grades of evaporated stock known as waste and chops. These low grades are quoted at present in the Rochester, N. Y. markets (Fruit and Produce Marketer, p. 9 Jan. 6, 1916) at from 2 3/4 c to 3 1/4 c per pound. With the cost of evaporation at about 2c per pound of evaporated fruit, and from 12 to 15 pounds of cured fruit per 100 pounds of green fruit, such low grade apples would only net about 12c to 15c per hundred if the growers owned their own evaporators.

It is only the good to medium grades of fresh fruit which will bring the top prices as cured fruit. This class includes medium sized, poorly colored, limb-rubbed, lopsided and slightly bruised fruit, but practically sound and edible when received at the factory or dryer. This is much the same type of fruit demanded for canning, and at about the same prices as quoted for canning purposes. In an interesting article on canning fruit Mr. A. W. Bitting (Fruit and Produce Marketer, p. 8, Nov. 25, 1915) writes as follows concerning apples suitable for canning:

"Only good cooking apples should be used in canning and only one variety in a can. There should be the same grading of apples as with other fruits. One cannot mix varieties which differ in weight, acidity, and cooking quality, and get a good or uniform product. The usual practice is to use late fall apples and the drops from winter apples for canning. Those used should be slightly acid, smooth and sound, and free from bruised spots. The peeling is done by hand or by power machines which remove the core by the same operation. Apples which are of good shape and free from blemish, may be canned whole for dumplings."

Turning now to the lowest grade or cull fruit there are several possibilities for its disposal; it may be made into vinegar, denatured alcohol or used as stock feed. The prices usually realized for vinegar apples of from \$2 to \$5 per ton may not warrant their special harvest during the rush season of picking and packing the higher grade fruit. The culls which come from the orchard to the packing house, however, mixed with better fruit, might be profitably utilized for vinegar purposes inasmuch as they have already been harvested and assembled at a central point. A portion of this fruit usually is even adapted to evaporation or

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canning so the average value to the grower might approach \$5.00 to \$8.00 per ton providing it could be handled through a non-profit co-operative fruit growers' association. Many orchards are experiencing a waste of at least a ton of this type of fruit per acre and at even \$6.50 per ton would amount to \$65.00 on a ten acre orchard, or enough to pay the grocery bill for a couple of months.

(To be concluded next week)

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## LIVE STOCK

### SILAGE FOR HORSES

E. H. Hughes, Missouri Agricultural Experiment Station.

In planting corn and building silos this year probably more farmers than ever before are providing a silage supply for horses. The old feeling that silage was good for dairy cows only was long discarded, but the horse is perhaps the last more important animal on the farm to prove that it could make good use of silage. While special care must be taken not to use moldy or other inferior silage or to depend too exclusively on silage, the recent tests of the Missouri Agricultural Experiment Station and long experience of a few farmers and horsemen, indicate that cost of up-keep can be reduced and a horse kept in better condition if from 5 to 25 pounds of silage are fed per day. Of course, the possibility of saving depends on the conditions and prices of other feeds, and the amount to be fed depends upon the same things and upon the size of the horse and the amount of silage he will eat. Different horses if the same size vary on this point.

In the tests, silage was fed as part of the ration during the last two winters with favorable results, except in case of one three-year-old Percheron mare which refused the silage at first, then at it when her feed was reduced, but soon after had to be taken out of the experiment because of distemper and indigestion. The horses that received silage were more thrifty, and their coats were in better condition, and cost less to feed than those which were fed exclusively non-silage rations.

One of the breeders, with whom the Missouri college has kept in touch, has been feeding silage to about 100 draft horses for twenty-five years without any sickness which he thinks could be directly charged to silage. During the breeding season he feeds silage to the mares as usual but gives none to the stallion, because he has difficulty in getting the mare in foal when the stallion was fed on silage. At other times he feeds eight pounds of silage at each of the three feeds per day to his aged stallions in addition to some hay and grain. His two-year-old stallion gets 20 pounds of silage a day, and the yearlings about 15 pounds in addition to some hay and grain, while the mares with foals at side receive 20 pounds. At weaning time this amount is divided and about 15 pounds is given to the mare and pounds to the colt, which is given more as it grows and becomes accustomed to this feed until at a year old he is getting 15 pounds of silage a day.

One importing firm has fed silage for five years following about the methods just outlined and reports excellent results and a reduction in the need for veterinary services.

Some of the horsemen who have fed inferior silage have not had such uniformly good results, but it is a poor plan to give a horse moldy or rotten food of any kind. Silage that has been frozen or that was made from immature corn is regarded with suspicion. Some owners have thought that their horses had died as a result of being fed such silage, and while the station has not been able to learn de-

initely that silage was the cause of death in these cases or find out exactly how the supposed poison acted, it is well to take every precaution.

As silage is low in dry matter and the horse has not sufficient digestive capacity to live entirely on such bulky feed, it is important to remember to use alfalfa, or other legume hay, or perhaps even a little grain for horses that are not at work, while growing horses, or horses at light work should certainly have grain.

### ADVANTAGES OF THE FENCE

There are many things in the improvements of today which are of great help to agriculture. One of these is the woven-wire fence. The modern method of making steel has made this fence a possibility. This method of fencing is so economical and satisfactory that we have seen it used in a timber country where, it would be supposed, other kinds of fences would be used instead. The woven-wire fence, usually placed upon a farm, is a woven-wire web of medium height at the bottom, with two barbed wires on top. Less posts are used than with the old form of fencing. A good fence can be made with the posts one rod apart, even twenty feet from post to post. Every farmer now understands that the corner posts is a key to a successful wire fence.

### Fences and Sheep

Here is where I can see an opportunity for increasing the number of sheep upon the middle west farms. The sheep ranges of the great west, where large hocks grazed upon government land are being reduced today very much as the cattle ranges were. Sheep have been for some time in growing demand for their meat and wool. More and better fences can be made with this modern fence than ever was known before. Here is where sheep can be ranged over the farm in rotation. The many noxious weeds will be consumed by them, and much growth of various kinds will be utilized by the flock in the making of flesh and the growing of wool. This consumption of weeds upon the farm is a thing greatly desired because of the increase which has come to us from continuous grain growing. When we add to this fact the scarcity of manual labor, then we have the two great reasons why sheep upon farms are desirable.

### Fences and Hogs

I was passing a field recently where I saw something which pleased me very much. There was a good woven-wire fence made with care, with the posts upright and straight, with the web fencing put on in a good workmanlike manner, and above the web were two good barbed wires that were carefully placed so that the spacings were equal, and the tops of the posts were also in line. This enclosed a field set aside for orchard purposes. It was sown to winter rye last fall. At this time the rye was well-grown, and within this enclosure, with its abundance of winter rye and young trees in nice form, there was a good number of brood sows and their pigs. These brood sows were of fine quality. They were large and roomy and belonged to the breed of swine known as the "durocs" that are certainly excellent grazers. The little pigs that followed were a thrifty lot. The

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mother sows were very busy grazing as constantly as cows would be, and the pigs were beginning to graze also, picking up the tender food as it appeared good to them. While I was looking at this combination I have described, I realized more completely than ever before the value of the improved fence. It would have been a very difficult matter to enclose those hogs before the days of wire fencing. Every farmer then knew how difficult it was to enclose hogs of almost any size. Here we had a perfect enclosure that held the sows with the pigs absolutely within the stated boundaries.

Judging from what I have learned from those who are expert in fruit growing, this combination of winter rye and grazing hogs is a good one for the young orchard. Provided the feed is abundant, I can see no reason why there should be any injury to the young trees because of stock grazing among them. There was one thing in this orchard that was rather unusual. There was a strong, thrifty, growing willow hedge about it which



was also enclosed by this fencing. Now in case the hogs desired to rub themselves against a tree or post, as they frequently do, they would naturally do so against the rugged willow. I looked carefully over the field to see if any young tree had been injured thus far and found none. One thing is very sure, that the weeds will have a hard time to make any headway against the grazing of the hogs and the thrifty-growing winter rye.

#### Healthy Meat

As I was looking over this portion of the farm, I was impressed with the great value of having pork grown under such desirable conditions, where there was ample room for exercise and abundance of good pure air, absolute cleanliness and plenty of sunshine. There was also the shade of the willows, which is very desirable for the hogs during the hot days of the late spring and summer. After a time, this winter rye would be too coarse and woody for grazing and, in that case, other crops could follow, such as rape, etc.—O. C. Gregg, Northwestern Agriculturist.

#### MORE PROFIT IN LIVESTOCK

By H. A. Bereman.

The increasing cost of meat in this country is making us a nation of vegetarians—more or less. Not so much so, of course, as the Chinese and the peoples of India; nor as much as the peasants of Europe. Yet the tendency in America is to cut out the meat and order another sack of spuds.

The nation must be fed with grain. Wheat bread is more than ever before, the staff of life for the masses.

The nation must be fed with grain—but wise farmers are learning to let the other fellow do it. They are turning their attention to the growing of small lots of high-grade meat animals.

In spite of the increased prices prevailing in the last ten years for grain and in the face of new lands exploited, and new and improved machinery, it is becoming a fairly settled fact that few farmers can show a genuine profit in the growing and selling of grain and hay. Some of them juggle themselves into the belief that they do so, but the history of impoverished soils and the evidence of run-down equipment and buildings are against them.

Taking into account the loss of soil fertility through continual cropping of land to grain with little or no return thereto of roughage or other fertilizers; estimating at its true value the interest on the market value of land; basing calculations upon the average yield of grain crops per acre in the United States for the past forty years; forgetting not the average farm prices for the crops—and not one in a thousand can show a profit in exclusive grain farming.

#### Soil Exploitation

Grain farming has always been a process of soil exploitation. The pioneer goes into the new land, breaks the sod, crops it to wheat, wheat, wheat; and in twenty years or less his virgin soil has lost so much of its native richness that yearly yields are considerably less. If the process continues, the soil soon becomes barren and no amount of scientific rejuvenation will bring it back to paying yields without immense expense.

If there is no profit in growing and selling grain, who shall answer the question of the consumer, "How can I reduce the cost of living to fit my

income?" Or the question of the grain farmer, "How can I grow grain for market at a profit and also maintain the richness of my fields?"

Being unable to answer either of these profound and far-reaching queries with any satisfaction, we suggest an alternative for the farmer, namely: Instead of hauling your crops to town, make them walk to market; or more clearly speaking, feed your grain and hay to horses, cattle, sheep, swine, poultry or bees and thus condense your raw materials and cut out the ruinous competition of these who are unable or unfit to make livestock profitable.

#### Pointing to More Profit

To the end that more profit may be made in livestock, the following outline is offered:

Feed to good grade or pure-bred animals all the hay and grain you can grow upon your acres; return to the fields all wastes of stable and feedlot; produce upon the farm everything the family needs in the way of food and clothing when it can be done economically; develop a special market when possible, for your surplus live animals, meat, eggs, milk, butter, cream, honey, wool, etc.; make the raising of maximum crops per acre the ideal towards which you strive.

On a well-tilled quarter-section of land in the mid-west, a farmer ought to be able to sell every year the following:

4 horses at \$200.00 each.....	\$ 800.00
10 calves at \$10.00 each.....	100.00
100 hogs (200 lbs. each- at 7 cent a pound- or \$14.00 each.....	1400.00
Poultry, eggs, honey, etc.....	200.00
Milk, butter or cream, from 15 good cows.....	1500.00
Total .....	\$4000.00

The above is a fair estimate. Many farmers do better. It does not include products of orchard and garden. It does not include the extra profits from the sale of pedigreed animals for breeding purposes.

#### Concentrated Products.

By the breeding, feeding and sale of good market animals, or better still by the growing of high-class pedigreed livestock, all the grain and hay can be converted into high-priced and easily marketable products which do not spoil quickly; which require small freight-costs in proportion to the value of those products; which turn back upon the land an amount of fertilizing material to keep up the yield of crops to their highest possible point. In brief, a well-managed live stock farm means permanently prosperous agriculture.

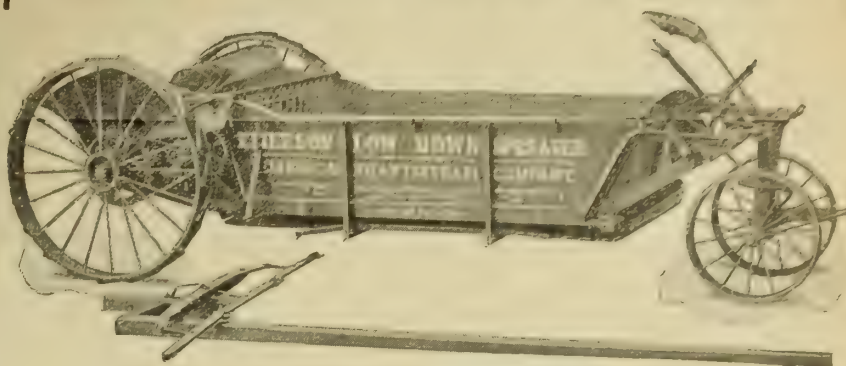
The world must be fed with grain to be sure—but the shrewd farmer is letting "George do it." He prefers to convert his raw materials of soil into bumper crops of grain, hay and pasture; to turn these into high-priced livestock; to convert these into cold cash and this again into comfortable and luxurious homes, pleasant surroundings, automobiles, books, pianos, travel, leisure—what you will.

Can a profit be gained upon the farm—the \$250.00 an acre farm?

It depends upon the man and the plan.

Good advice may help a man but a good scare is often more effective.

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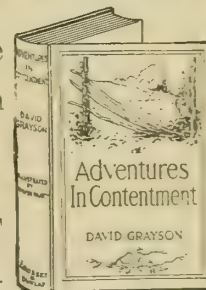
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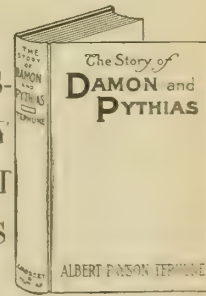
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IT IS OUR PLEASURE TO HELP BUSY PEOPLE SELECT THE RIGHT BOOKS



## Deseret Sunday School Union Book Store

44 EAST ON SOUTH TEMPLE,  
SALT LAKE CITY, UTAH





For Greatest Satisfaction Use  
**DOUBLE SERVICE**  
**Automobile Tires**  
Guaranteed 7,000 Miles Service  
**Absolutely Punctureproof**

Double Service Tires are made double the thickness of the best standard make tires.

This 100% greater wearing surface naturally gives that much more mileage and service. The average of 12 miles of tough one inch surface tread rubber makes these tires absolutely punctureproof.

These tires excel all others for use in the country over rough and rugged roads as well as on hard pavements. They are as easy riding and resilient as any other pneumatic tire—the air space and pressure being the same.

They are the most economical and "care free" tires made and are used where tires must be depended on and tire troubles cannot be tolerated. Many Double Service style tires are in use in the U. S. government and European War service. Our output is limited to a certain amount, but for a short time we offer the following reduced special prices as an Introductory Offer:

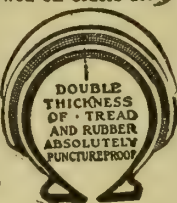
**PRICES**

Tires Tubes		Tires Tubes	
30x3 in. \$ 8.60	\$2.30	36x4 in. \$17.45	\$4.65
30x3 1/2 in. 10.55	3.10	36x4 1/2 in. 21.20	6.00
32x2 1/2 in. 12.75	3.20	36x4 1/2 in. 22.50	6.75
33x4 in. 15.75	4.20	37x4 1/2 in. 23.60	6.20
34x4 in. 16.70	4.35	37x5 in. 26.30	6.60

All other sizes not included in above list also furnished. Non-skids at 10% additional. Terms: Payment with order at above special prices, a 10% discount allowed on orders for two or more tires. All personal checks must be certified.

Try these tires now and be convinced of their very high qualities. Sold direct to the consumer only. Descriptive folder upon request. Write for it.

Double Service Tire & Rubber Co., Akron, O. Dept.



**SEND US YOUR KODAK FILMS**

We Develop Any Size Roll 10¢  
We Develop Any Size Film Pack 20¢  
Prints Made From Only Good Negatives  
We Pay Postage

**SHIELDS STATIONERY Co.**

KODAK HEADQUARTERS

131 MAIN ST. OPPOSITE KEARNS BLDG. SALT LAKE CITY



**For silo owners**

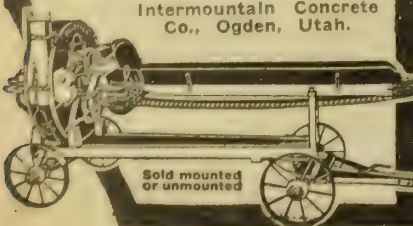
**Start now to choose your silo filler**

Losses were very heavy last fall among farmers who depended upon somebody else's cutter, and couldn't get it when needed the worst. Others lost big because their cutters broke down at the critical time. The

**BLIZZARD**  
**Ensilage Cutter**

Is the dependable machine for the farmer—because so simple, safe and easy running. Small engine—plenty powerful enough. Unlimited cutting and elevating capacity. Fits the world's largest silos as easily as twenty-footers. Self-feed table saves one man. Repair cost very little. Many still giving good service after ten and fifteen years of use. Talk with us about an ensilage cutter now. Drop in for a catalog, at least.

Intermountain Concrete Co., Ogden, Utah.



Sold mounted or unmounted

**THE HOME**

**BUTTER MAKING ON THE FARM**  
By Lillian Rowberry, Home Economics Department, U. A. C.

Owing to the great value of butter as a food, and to its extensive use as such, great care should be taken at every step in the butter making process to insure a product that will meet the requirements of the users of it.

In the first place good butter requires sanitary cream. This means that the cows from whose milk butter is made should be healthy, that stables in which cows are housed and the cows themselves as well as the utensils used in handling milk and cream should be clean.

Pails and pans used for milk should be smooth inside having no cracks or seams to harbor bacteria and in which dirt could collect, and should be used for nothing else.

After milking all utensils should be rinsed in cold or warm water, washed with soap and hot water, and sterilized with steam or hot water. Exposure to the sun is very good if they can be kept from getting dusty. A sunning room attached to the milk house is a good idea.

After straining, milk should be cooled to 55 degrees as quickly as possible then set away to cream if creaming is done in pans. Wherever possible however, it is better to separate the cream, after which the separator should be thoroughly washed and sterilized.

Cream should be kept at from 50 to 55 degrees F. until about twelve hours before churning when the temperature should be raised to 70 to 80 degrees to hasten the ripening through the growth of lactic acid bacteria. The use of a good artificial "starter" is better than to trust to the bacteria from the air to bring on the ripening of the cream. The right degree of ripeness is shown by the shiny appearance of the cream.

The worst fault of ordinary butter is bad flavor which can usually be prevented by hastening the ripening process. Conditions affecting churability of cream are temperature which should be 60 degrees F., richness and ripeness of cream, the quantity of it, and nature of the agitation.

If cream is too hot butter will be greasy.

Rich cream churns easier than does poor cream. In churning the cream should fall back on itself. This is accomplished best in a barrel churn.

Churning should be stopped when the granules are about the size of a kernel of corn. Over churning spoils the texture and adds water to the butter.

When the butter is gathered, the butter milk should be drawn off and the butter washed several times or until the water comes off nearly clear—in water the same temperature as the cream. If butter is too soft it should be rinsed in cooler water and if too hard, the water should be warmer.

Taste much governs the amount of salt put in butter, tho the average amount is 3/4—1 oz. of salt per pound. Salt not only adds to the flavor of butter, but assists in the re-

moval of butter milk and increases the keeping quality.

There are three reasons for working butter:—to distribute salt through it, to bring it to a compact form, and to expell water. When broken butter should be firm and granular, therefore should not be mixed too much. The color of natural June butter is the standard. Vegetable coloring may be used at other times, not more than three teaspoonfuls to three pounds of butter. The coloring should be added to the cream just after putting it into the churn.

After begin molded, butter should be wrapped in parchment paper to prevent loss of water and prevent salt collecting on the surface, as well as to keep out dust and other undesirable things.

Butter may be kept a long time if packed in crocks, after being well salted, covered with paraffin to prevent entrance of air, and kept in a cool dark place.

**CONVENIENT KITCHEN**  
**SAVES MUCH WORK**  
Edith Salisbury.

It is surprising how much even a small change in the arrangement of the kitchen will lessen the dairy work of the ranch home. Often a little intelligent thought, without the expenditure of a single dollar, will accomplish wonder. During the next few weeks when the spirit of spring renovating is in the air, bring a little more serious thought to bear upon your kitchen and see if a simple grouping of the equipment will not reduce the time and effort spent on routine duties.

A kitchen, as a work room should have three centers: There should be the cooking center, the mixing center and the work center, as these are the general occupations of the kitchen. The chief equipment of the cooking center is obviously the stove or range. Around this should be conveniently arranged the utensils needed in cooking. The various kettles and sauce-pans, fry pans, double cookers, forks, knives and spoon used in stirring and trying cooking food, oven cloths, hot pan lifters, and all such necessary articles should be within hand's reach of the stove. This group should be a very near neighbor of the sink which must of necessity be the principal feature of the work center. On the sink, or in its cupboard or on a conveniently placed shelf will be arranged the paring and chopping knives, the materials for cleansing pots, pans, woods and metals, dish pans, etc. At the mixing center will be grouped all the utensils required when cooking is to be done. Here will be the mixing bowls, the bread pan and mixer, the egg beaters, mixing spoons, measuring cups, baking pans and dishes, rolling pin and kneading board.

Having these three centers furnished with all the necessary tools of each kind of work will save not only many steps, but many minutes in a day's work. The mixing center should include also some of the staple supplies used in ordinary cooking, such as a small quantity of flour, sugar, baking powder, spices, etc. A supply sufficient to last a week, if the cupboard is not large enough to contain more, will be a big help.

**YOU CAN'T PLOW WITH AN AUTOMOBILE**

Power and weight are necessary factors in heavy traction work like plowing. Many attempts have been made and are being made now to do this class of work with light-weight explosive engines.

They do not and cannot get the same economical results that properly designed and constructed Oil-Gas Tractors can accomplish.

**NICHOLS & SHEPARD CO.'S OIL-GAS TRACTOR**

Is properly made to do the work that it is expected to do. It is not an experiment, but a tried and tested machine, good enough and reliable enough to be sold under the Red River Special name and guaranty.

It will plow, haul and work at the belt with the steadiness and sureness of steam.

Operating economies are highly developed. It has the power, it has the strength, it has the weight to do the things that you want it to do—and that we guarantee it to do—without stalling or breaking down. That's business.

**DON'T TRY TO WORK A PLEASURE MACHINE**

There's a lot to this gas engine question. It is well worth careful investigation before you buy any kind of a tractor that makes power with oil or gasoline. Write us for particulars and consider the facts that we put before you before your decision is made. Ask for the Home Edition of the Red River Special paper and the Big Catalog that tells about our line.

**NICHOLS & SHEPARD CO.**  
(In Continuous Business Since 1848)

**BUILDERS EXCLUSIVELY OF**  
**THRESHING MACHINERY**

Red River Special Threshers, Feeders, Wind Stackers  
Steam and Oil-Gas Traction Engines  
(10) BATTLE CREEK, - MICHIGAN

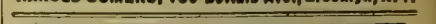
**Kill All Flies! They Spread Disease**

Placed anywhere, **Daisy Fly Killer** attracts and kills all flies. Neat, clean, ornamental, convenient, and cheap.

Lasts all season. Made of metal, can't spill or tip over; will not soil or injure anything. Guaranteed effective. Ask for **Daisy Fly Killer**.

Sold by dealers, or sent by express, prepaid, \$1.00.

**HAROLD SOMERS, 150 DeKalb Ave., Brooklyn, N. Y.**



**KEEP THE RATS AWAY**

Rodents will not touch harness that is treated with

**EUREKA HARNESS OIL**

That is because Eureka contains no animal or vegetable oils. Keeps your harness soft, pliable and strong.

Dealers everywhere

**THE CONTINENTAL OIL CO.**  
(A Colorado Corporation)





### QUESTIONS EVERY MOTHER SHOULD ASK HERSELF

At the close of the day every mother might ask herself the following questions, to be sure that she has considered the important things in feeding her children:

Did each child take about a quart of milk in one form or another?

Have I taken pains to see that the milk that comes to my house has been handled in a clean way.

If I was obliged to serve skim milk for the sake of cleanliness or economy, did I supply a little extra fat in some other way?

Were the fats which I gave the child of the wholesome kind found in milk, cream, butter, and salad oils, or of the unwholesome kind found in doughnuts and other fried foods?

Did I make good use of all skim milk by using it in the preparation of cereal mushes, puddings, or otherwise?

Were all cereal foods thoroughly cooked?

Was the bread soggy? If so, was it because the loaves were too large, or because they were not cooked long enough?

Did I take pains to get a variety of foods from the cereal group by serving a cereal mush once during the day?

Did I keep in mind that while

cereals are good foods in themselves, they do not take the place of meat, milk, eggs, fruit, and vegetables?

Did I keep in mind that children who do not have plenty of fruit and vegetables need wholewheat bread and whole grains served in other ways?

Did each child have an egg or an equivalent amount of meat, fish, or poultry?

Did any child have more than this of flesh foods or eggs? If so, might the money not have been better spent for fruits or vegetables?

If I was unable to get milk, meat, fish, poultry, or eggs, did I serve dried beans, or other legumes thoroughly cooked and carefully seasoned?

Were vegetables and fruits both on the child's bill of fare once during the day? If not, was it because we have not taken pains to raise them in our home garden?

Did either the fruit or the vegetable disagree with the child? If so, ought I to have cooked it more thoroughly, chopped it more finely, or have removed the skins or seeds?

Was the child given sweets between meals, or anything that tempted him to eat when he was not hungry?

Was he allowed to eat sweets when he should have been drinking milk or eating cereals, meat, eggs, fruit, or

vegetables?

Were the sweets given to the child simple, i. e., unmixed with much fat or with hard substances difficult to chew, and not highly flavored?

Was the food served in a neat and orderly way and did the child take time to chew his food properly?

### HOW TO MAKE COLORS IN GINGHAM "FAST"

#### Simple Household Mordants Will Turn Trick

It might be well to take precautions to "set the colors" in gingham and other fabrics at the time the shrinking is done, before making them into new spring garments. Any chemical substance used to set colors is called a mordant. Common household mordants are as follows: Brine, sugar of lead, alum and vinegar. They may be used in the following proportions:

To 1 gallon of water add:

$\frac{1}{4}$  cup mild vinegar, or 2 cups salt, or 1 tablespoon powdered alum, or 1 tablespoon "sugar of lead" (poison).

In most cases allowing the material to soak several hours in the mordant is sufficient, although with salt and vinegar solution no harm is done if the material soaks over night. The material should be thoroughly dried before being washed, and always hang in the shade. Vinegar is best for

pinks, brine, for blacks and reds, sugar of lead, for blues and browns, and alum, for greens, lavenders, purples, etc.

To freshen colors, soak garment in a weak solution of borax before washing. A little ox-gall in the borax water will help keep weak colors bright. — Mariam M. Hayes, Colorado A. C.

Horseradish sauce is excellent with roast or boiled beef, hot or cold. It calls for one teaspoonful of dry mustard, one teaspoonful of vinegar, three tablespoonfuls of thick cream, one-half teaspoonful of chopped onion, a pinch of salt, and the horseradish. The vinegar and dry mustard are mixed well together, then the cream, onion and salt added. The horseradish is then grated in, enough to make a sauce as thick as whipped cream. Cold boiled salt pork, is very nice with this sauce.

Feeding a little linseed meal occasionally to stock is beneficial, keeping the system regulated.

The Ontario experiment station says that it costs pretty close to \$4 to raise a pig to six weeks of age, counting cost of sire and dam and feed cost.

## SALT LAKE THEATRE

Salt Lake City, Utah.

**Commencing  
Friday Matinee,  
June 9th**

2:15—Twice Daily—8:15

A Photo-Dramatization  
of  
The Reconstruction Period  
of the South After the Civil  
War.

Set to Music  
And Rendered By  
A SYMPHONY  
ORCHESTRA  
OF  
25

## RETURN FOR BRIEF ENGAGEMENT

Elliott and Sherman Present

D. W. GRIFFITHS GREAT AMERICAN PLAY



### Prices

Matinee

25c-50c

Nite

25c-50c-75c

and \$1.00

Children

Under

Twelve 25c





## That Good Taste

Certainly fruit that is canned at home tastes just right—and it's always economy to can fruit. Every housewife realizes that the place of home-canned fruit on the family diet list can only be taken by some food that is more expensive—while the food value of both the fruit and sugar is greater in proportion to the cost.

### CAN FRUIT AT HOME

## The Bread of Purity and Goodness

When bread is made as good as "Royal Table Queen," there's no wonder the housewives avail themselves of the freedom from bread baking. There's a lot of unpleasant work, and it costs just as much to make home bread. Serve

### ROYAL TABLE QUEEN "The Perfect Bread"

and see how the family enjoys it from the very first bite. Its golden goodness always has a zest and flavor that are irresistible.

Royal Table Queen Bread, fresh every day at your grocer's. FREE Flags of all Nations and Beautiful Pennants with the large loaves.



### Royal Baking Co. Salt Lake

When you answer the advertisements in this paper tell them you saw it in the Utah Farmer. Always buy advertised goods.

## Credulity and Cupidity

State Dairy and Food Department and The State Board of Health Article.

"There are just two sides to the big question of medical frauds that are being perpetrated, and successfully, on the people of Utah as well as every other state," said Dr. T. B. Beatty, state health commissioner. "Both can be expressed with two words and each of these words begins with a 'c.' On one side is the public—credulity. On the other, the makers of bogus nostrums—cupidity."

We believe that most thinking persons will agree with the state health commissioner in the matter of the public being credulous. There is no doubt that most of us are gullible—especially, as we have stated before, if we be ill. Somebody has said "there's a sucker born every minute" and we are inclined to believe it when we check the huge sales of fake and worthless remedies that are sold to Utahns every month.

"We do a monstrous business in patent medicines," remarked a drug clerk, discussing the sale of quack nostrums.

He meant "monster business," of course, but he spoke better than he knew. The business in patent medicines—most patent medicines—is actually monstrous in the purest sense of the word.

The fight that the two Utah state departments are making on this quackery is already having its effect. The makers of fake remedies have begun to squeal a bit and already there have been threats of damage suits. These manufacturers of bona fide patent medicines—and there are many such—have nothing to fear from publicity. When we say nostrum and fake remedy we do not refer to standard and tested meritorious drugs, such as a physician might prescribe even though it be proprietary. There are many such. We don't wish to advertise any particular brand, but there are, for instance, good, mild laxative syrups in various forms that the family doctor will tell you to give the baby. Those things are not fakes.

But it is not the manufacturers of good medicines who have threatened through their representatives that they will "get" certain state officials. The makers of the fakes—the fakers themselves—are the ones whose business is being injured by this series of articles. They know that the people of rural Utah—the countryfolks of highest intelligence of any in the land—who read this magazine, have started to think. They know that though these readers may have believed wonderful cure promises in the past, made in what are supposed to be reputable newspapers, that they will think twice or three time hereafter before buying "cures" on advertised testimony.

Their "sales" have dropped off. This volley of truth has wounded them in the most vulnerable spot possible to strike a bogus nostrumite in—his pocketbook. Do you suppose that the manufacturers of kidney trouble and heart disease and consumption and epileptic fits care two whoops whether anyone is cured by their dope or not. They cannot possibly care, for they know that their worthless preparations can cure nothing and nobody—that no takers of it will be cured unless Dr. Nature cures them. What they are

interested in is your money and the more they can get the more they want. That is where the "cupidity" comes in.

Now a word as to the newspapers and we say the newspapers because practically all published in this section come under the category—there are few of the stamnia of the Chicago Tribune, that refused to open its columns to fake advertising; and there are few magazines such as Collier's or the magazine you are reading that dare to not only refuse space to such frauds but will come out boldly and print the truth concerning them.

Now if a doctor were to prescribe a serious operation or the use of some narcotic for one of his patients merely in order to run up his bill—to make money—and he were caught at it, do you know what would happen? Well, who do you suppose. The chances are that some dark night the aggrieved relatives and other irate persons would take that doctor out of town on a rail or might treat him to a dose of tar and feathers in the right proportions. There have been isolated examples—be thankful but a few—of just such deeds by irresponsible and contemptible physicians, men who were undeserving of the honorable title that the guardians of health are privileged to use.

But just think of the newspapers that come into your home every day or every week to tell you the news and upon which you have come to rely as you would upon your family doctor. Just think of how these old family newspapers, through their advertising columns, will prescribe erroneous, useless and even dangerous treatment for you or some member of your family. And why do they do it? For the same reason that the aforesaid contemptible doctor might fleece a patient—to gain money.

"Well, we need the advertising; we get high rates for it and we cannot afford to turn it down," was the whining plea of a city newspaper business manager, recently, when he was urged to stop the publication of these quack advertisements.

But the people are waking up. Now the vigilance committee of the Salt Lake Advertising club had decided to declare war and ally itself with the Utah state departments against the common enemy of the people. Fraudulent medicine and fraudulent advertisements must and will be wiped out.

And the sooner they start those threatened suits against the Utah state food and health departments, the better the heads of those departments will like it. They are trying to libel them, if such a thing be possible by telling the truth and nothing more.

### THE SILO

A silo is the best insurance against an early frost.

A silo this year may be worth two next.

Perhaps you can get along without a silo, but you can do better with one.

Don't expect your cows to be greatly benefited by looking at your neighbor's silos.

## VICO Automobile OIL



IT'S money in your pocket—cold cash—to see that your car is kept in the highest state of efficiency and in perfect condition. Better service, a good re-sale price, will be the result. These are matters of natural sequence, if you use the correct consistency of Vico Automobile Oil—refined to "make good in this climate"

### Utah Oil Refining Co. Refiners Salt Lake



"EVERY  
DROP  
COUNTS"

### UINTAH BASIN FARM LANDS priced to sell.

One of the choicest 80 acre tracts near Roosevelt, best of land with full water right, small house, partially fenced, artesian wells on adjoining land. Price for quick sale \$40 per acre.

**B. L. DART**  
Owner

Myton

Utah

### Lumber at Wholesale

We can save you from 25 to 40 per cent on lumber, lath, shingles, mouldings, shash and doors.

Let us figure with you on that new house and barn. We ship direct from the mill saving you the middlemans profit.

If you wish to save money and want quality lumber try us.

**Apex Lumber & Shingle Co.**  
227 and 228 Obington Bldg.  
Portland, Oregon.

Y. M. & Y. L. M. I. A.

Rates to Salt Lake City via Salt Lake Route. Tickets on sale Nephi and Tintic and East June 7th to 11th inclusive. All other points June 6th to 10th inclusive. Return June 16th

If you are growing your own dairy cows, keep in mind that a half-starved, poorly grown heifer calf will never develop into a profitable cow.—Exchange.





Combined with the  
Deseret Farmer and Rocky Mountain Farming  
Established 1904

Entered as second-class matter in the postoffice at  
Lehi, Utah.

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LEHI, UTAH.

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#### OFFICES

All mail should be addressed to the Utah Farmer  
Lehi, Utah Kirkham Building.  
Our office at Salt Lake City, Utah,  
is at 417 McIntyre Building.



New York Office 5th Ave. Bldg.  
S. E. LEITH, Mgr.

Chicago Office Steger Bldg.  
TOM D. COSTELLO, Mgr.

St. Louis Globe-Dem. Bldg.  
C. A. COUR, Mgr.

**Change in Address**—When ordering a change in the address, subscribers should be sure to give their former as well as their present address, otherwise the address cannot be changed. This is a matter of importance to you and to us.

#### OFFICIAL ORGAN

Utah Horticultural Society, Utah State Dairymen's Association, Utah State Bee Keepers' Association, Bear River Valley Farmers' Protective and Commercial Association Agricultural College Extension Department and Utah State Fair Association, Utah-Idaho Millers' and Grain Dealers' Association, Utah Fruit Growers Association.

#### OUR GUARANTEE

We guarantee every subscriber against loss thru dishonesty or attempted swindle by any advertiser in this publication. We do not attempt, however, to adjust trifling differences between the subscribers and honest responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within thirty days from date of the transaction, and the subscriber must have mentioned Utah Farmer when writing the advertiser.

**Advertising Rates**—The advertising rates will be sent upon application.

#### REGARDING THE ROSE PREMIUMS

Many of our subscribers have written us regarding the Rose Premiums. Some have already received these premiums, and every order for roses has now been filled; yours will reach you within the next day or two.

The fly is a menace to the health of every member of your family, and one fly is responsible for a host of offspring. Now that the warm weather is with us it is an absolute necessity for you to take time to examine all screens and see that they fit snugly. A fly will find a way into the kitchen if there is a way left open to be found.

Paint up. Get on the bright side of life, and show your colors. Many of your city friends will be coming to see you now that the spring is with us again, and if they find the same old weather-beaten barn, the unpainted dwelling and the other buildings about the farm all unpainted, and weather-worn, there is but one impression they can receive, i. e. the home of a careless, shiftless farmer, without pride or ambition to be up to date.

#### PURE BRED ANIMALS PAY

It is always well to remember when you are stocking up your farm that the best is none too good, and the quality and the value of the mature animal is largely determined by the quality of it when it was born. The men who are making the most money in the production of livestock of all kinds are the men who use only well bred animals, whether they are pure bloods or not, and

who take excellent care of them right from the start. They give them comfortable quarters, even though they are not costly buildings, and good care and feeding from the day they land in this world. They start only with good prospects, and nurse them along to successful finishes. If they did not do this, they would lose money at their business.

#### YOUR PARTNER

Every successful farm means that the wife is an active partner, whether her membership in the firm is openly acknowledged or not. She helps in all the plans for the betterment of the farm; she carefully watches, and checks the little leaks that amount to so much in the aggregate; in general, the more she is consulted in the planning of the income and the outgo of the farm, the larger will be the net income from the business at the end of the year.

Now, since the wife is an active member in the business, why not give her the full credit due her to the public? There is nothing more encouraging to the wife than to know that all her efforts are appreciated.

#### MAKE GOOD HAY

Many of our farmers are already cutting their first crop of hay, and it is well to bear in mind at this time that millions of tons of hay are spoiled because we do not employ the methods which we should employ every year in making the best hay that it is possible to make.

It is a well known fact that all hay, either for feeding purposes or for marketing, especially legumes, should be cured in the shade, and it should always be kept dry during the process of curing.

Finally, hay should be carefully stacked so that the rains will not leach into the mass, and thereby if not spoiling the entire stack, at least causing it to become moldy and unpalatable to the animals that will have to subsist upon it.

#### CO-OPERATE WITH YOUR SON.

We hear a great deal of talk about the trouble that is sometimes encountered in keeping the boys on the farm. Undoubtedly one of the most successful ways of doing this, is to form a joint ownership with the boys, and give them a hand in the management of some of the work on the farm. Remember that giving the boy a show, should mean, give the boy a share. It is not surprising that boys long for the time they can go to the city where their labor will be properly compensated, if they are treated only as employees on the farm without pay, except board and lodging. Responsibility adds zest to any line of endeavor, and experience has shown the wisdom of permitting the boys to share in the ownership, management, and profit of the farm if they are to be kept on the farm.

#### WHY IT PAYS TO ADVERTISE

A number of reasons might be given as to why it pays to advertise. The manufacturer of any article wants to reach the consumer at the lowest possible cost.

The man who advertises and thus creates a demand for his product is the man most worthy of your trade. His goods are made in large quantities and for this reason you should get a better article for the money.

Because his goods are rapidly sold, the stock

changes often and should be fresher than the goods of the man who doesn't advertise.

Because a man can dispose of the advertised product more quickly than anything else he makes more sales; he turns his money over sooner and his profits on the business are large, even though he makes less on each sale.

Everybody likes progress and profit and you will find infinitely more of this with the advertised article than you can with one made by a man who is too sleepy to see the advantages of advertising. So it would seem that you protect yourself when you give consideration to what kind of merchandise you are going to buy, whether it shall be the popular, economical and clean brand of advertised merchandise or whether you will be content to buy any stale and dirty thing that is handed to you, no matter how old it is or how much modern improvement is lacking to make it right in both quality and price.

We investigate our advertisers and know they are right before we let them place their message before you in our columns.

It pays them to advertise and it pays you to buy advertised goods.

#### A SUGGESTION TO COUNTRY MOTHERS

All intelligent mothers want their daughters to be modest and pure, their sons to be clean and noble. Sanitation and hygiene are found in textbooks and are supposed to be taught in schools, but text-book knowledge is dead stuff until it is put into practice. The next step is to bring this information down to earth and connect it up with the daily lives of the children, and these lessons must be so thoroughly taught that they will stick, not only by precept, but even more by practice.

Physicians used to treat symptoms, now they try to locate the cause of the disease. They used to dope patients for malaria and yellow fever, now they kerosene the mosquito. They still prescribe for typhoid, but at the same time they "Swat" the fly. Most teachers give some attention to dress, cleanliness and personal appearance of their pupils while in the school-room, but in most cases it ends with that.

The most unspeakable spot on the school grounds or in the district is the privy. A few schools have none. Some have but one for both boys and girls. More have the two joined together and separated only by a single board partition, while many are partly "caved in" or "caved out," or with doors off, and very few are screened and so separated as to insure any privacy. Most of them are reeking with filth and covered with obscenity, breeders of disease and corruptors of the morals and manners of innocent children.

Teachers pay little attention to this subject, school boards pay less and parents scarcely any at all. Yet it is far more important to know what a teacher will do to protect the child from a foul closet, with floor and seat covered with human filth and wall with lewd words and pictures, than to know how she will grade in arithmetic, or what is the grade of her certificate. It is more necessary for the school board to properly look after this matter than to buy dustless crayons and felt erasers, for scars on character do not erase. And it is even more important for parents to guard the morals for their children from the evils of the school privy than to protect their health in the schoolroom.—C. G. Sargent, Colorado A. C.



## POULTRY

### POULTRY CULTURE

H. A. McKeene.

**Artificial Incubation.**—The artificial incubation of the egg is a problem that is worthy of our best thought. In selecting eggs for hatching, very small eggs and those unusually large should be discarded. This is also true of those with rough or uneven shells as well as those with chalky shells and of light weight. The ideal egg for hatching is the one of average size, smooth, strong shell, heavy specific gravity, and a strong germ. Such an egg, under favorable conditions, will hatch in 19 to 21 days. The incubator has come to stay. It is recognized as a necessity if early pullets for winter laying are desired. Heat for incubators is supplied by means of electricity, acetylene gas, kerosene, or hot water. The majority of incubators are heated by kerosene. This is unsatisfactory unless a high grade of oil is used. Many prefer a hot water system of heating, claiming that chicks hatched by this system are larger and more vigorous; that fewer die in the shell and that there are fewer cripples.

**What Constitutes A Good Hatch?**—Most breeders are satisfied with a 50 per cent hatch of all the eggs that go into incubator, and if they are successful in raising to maturity 50 per cent of the chicks they consider themselves fortunate.

In running the incubator some advise keeping the temperature at 103 from start to finish. Others advocate 102 degrees for the first week, 103 degrees for the second week and 103 to 104 degrees for the third week. Perhaps the second plan gives best results. Many advocate supplying moisture especially with the hot air machines, as this system of heating tends to evaporate the egg contents, and the presence of water will retard it, while water also unites with carbon dioxide to form carbonic acid which in turn decomposes the shell and prepares it for the process of hatching.

**Marketing Eggs.**—If eggs are to be shipped for hatching purposes they should be wrapped in soft paper, then wrapped in excelsior, and then packed in a basket that has been lined with excelsior. The basket should have a handle to insure careful handling. Eggs for market should be assorted and carefully packed. Commission men usually classify eggs as "rotten," "dirty," "cracked," "shrunk," "firsts," "prime firsts," "extras," and "strictly fresh." These grades are determined by a process of handling and special men are employed to accomplish this work at considerable expense.

It is claimed that the loss of eggs due largely to carelessness on the farm amounts to \$45,000,000 annually. The farmer could save a large portion of this loss if he would assort his own eggs before they leave the farm, pack them carefully and ship only those that are really fresh.

The boom in poultry culture has become perennial. It is not local, it is nation wide and world wide. There are no signs that this universal interest in the hen and her products will grow less. The largest output we can possibly handle will be the wise program for the hatching season this spring.

### FRESH AIR FOR POULTRY.

Thorough Ventilation of Houses Desirable Both Day and Night, Even in the Coldest Weather.

There has been in recent years a marked tendency in poultry-house construction toward securing more fresh air, both day and night, by replacing the glass windows with cloth or muslin or by making the front either of muslin or entirely open. Tight houses with double walls are almost relics of the past. Fresh air is one of the prime essentials in poultry houses, and warmth secured by keeping the house shut up tightly is not as desirable a lower temperature and some ventilation.

The back and sides of the poultry house should be absolutely tight in order to prevent drafts which may cause colds in the flock. This leaves only the front of the house of muslin construction or entirely open. An opening which can be closed by a shutter may be used to advantage in the rear wall of a poultry house in the South, or in growing houses in all parts of this country, but this should be constructed so that there will be no draft in cold weather. The front of the house should be so high that the windows or openings will allow the sun to shine well back into the interior during the winter. Burlap, unbleached muslin, or light-weight duck cloth may be used for curtains in the front. This cloth should be thin enough to allow a slow circulation of air without a draft. This is impossible if too heavy a grade of duck cloth is used or if the cloth is oiled or painted.

Houses with the fronts entirely open are well adapted, and this type is used with success in all sections. They require less attention than houses where the ventilation is controlled by the use of curtains or windows, the majority of poultry keepers prefer to have part or all of the front of their poultry houses under control, in order to keep the snow, rain, and wind from beating into the house and to protect the poultry during the cold weather. If the curtain is not attended to, however, curtain-front houses may be less satisfactory than the open-front type.

A large amount of glass in the front of the house makes it warm during the day but cold at night, as glass radiates heat very rapidly. Some glass, however, is helpful in providing light when the curtains are closed. Some ventilation should be given in a poultry house even on the coldest night. It is usually best secured by leaving a small window open or having muslin curtains in the front of the house. If the house is shut up tightly without any muslin curtains in the front there is a tendency for moisture to collect in the house and condense on the rafters and other woodwork on frosty mornings. It is not necessary to close the muslin curtains in the front of the house except in very cold or stormy weather. Hens are protected by nature with warm feathers and a high body temperature so that they are better able to withstand dry, cold air than warmer air which is damp.

The nutritive value of food is greatly reduced by freezing. This holds true not only of fruit and vegetables, but of corn fodder and ensilage, though the loss is less in the case of corn that is cut at once for ensilage than in that which is shocked for dry feed.

## THERE'S MONEY IN IT

### FOR YOU--READ THIS

The raising of Alfalfa Seed has become one of the leading industries of the farmers of this section of the country. It pays big dividends to those who have been raising it.

### HERE IS A START FOR YOU

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## Gem Herd of Improved Chester White Swine.

This Herd Bred, Raised and Sold. Both Boar and Sow Grand Champions of the World's Fair held at Frisco this last year. Both Sire and Dam, is still in the herd. If such breeding interests you, write for illustrated catalogue. Stock of all ages for sale at all times.

Address

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**BOURBON RED TURKEY EGGS**  
At rate of 3 for a \$1.00 or 10 for \$3.00.  
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B. F. ELIASON

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BABY CHICKS \$11.00 PER 100**  
Circulars, order-blanks, etc., upon request. Candee Colony Brooders carried in stock.

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on eggs for hatching for balance of season and on breeding stock as long as they last.

**4 BEST LAYING STRAINS**  
R. C. Reds and White Wyandottes  
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E. C. BLANPIED

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Good land between 13th and 14th South for quick sales; \$425, \$10 cash, \$10 per month.

9 acres between 13th and 14th South, good for dairy or gardening. Can cut into lots later; only \$400 per acre, \$200 cash, balance easy, or might trade.

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Ideal City Home of Ten Rooms, elegantly furnished with all modern improvements and conveniences, located on paved avenue, east side residence section of Salt Lake City, for sale reasonable... For particulars, address 236 Atlas Block, Salt Lake, Utah.

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Duroc Jersey pigs for sale \$5.00 each, two months' old. Two old imported boars and three sows to be sold at a sacrifice.

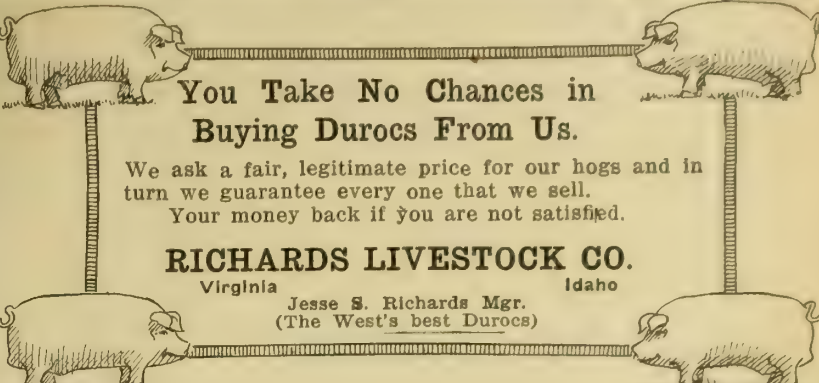
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As good as new, has not had four months use, a No. 5 Oliver typewriter for sale cheap. Address D-201 East Broadway, Salt Lake City, Utah.

## RANCH, \$20 PER ACRE

1,500-acre ranch, well improved abundance of free range adjoining, equipped with machinery, etc. Good herd of cattle can be bought with ranch. Price, \$20 per acre. Will take good farm as part payment.

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We ask a fair, legitimate price for our hogs and in turn we guarantee every one that we sell.  
Your money back if you are not satisfied.

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Young pigs for sale at reasonable prices. Pairs not related can be furnished.

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## 20 ACRES

farm in sugar beets, close to beet dump, good improvements, the best of soil, water and climate, nearly ideal and the price for this home is \$3500.00. Terms reasonable.

If you want one of the very best 60 acre farms in the valley, with improvements to correspond, a perfect dream, just the one you want, price is right. For prices and terms on variously sized farms in the Great Bear River Valley you must call or write to the

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Wanted to hear from owner of good farm for sale. Send description and cash price. R. G. List, Minneapolis, Minn.

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Utah Big Type Poland China Hogs. Fall and Spring Boars, a few gilts. Best blood and breeding, real big type. Write or come and see them.

**H. G. JOHNSON**  
East Garland Utah

Do not wait until you have used the last Butter Wrapper before ordering more, because it takes time to print them.

## WHEN TO SUSPECT CHOLERA

When a disease that is contagious appears among hogs, spreading more or less rapidly, is quite uniformly fatal, and is accompanied by a high temperature, it is quite safe to assume that it is cholera.

Where cholera is suspected, it is well to get a thermometer and take the temperature of a number of those that are apparently well. The normal temperature is from 101 to 103 degrees in winter and about 1 degree higher in summer. If cholera is present, the temperatures will be found as high as 105 to 107 degrees.

Make a post mortem on a hog that has just died and examine the kidneys for small, dark red spots resembling those on a turkey egg. Look for small red spots along the small intestines and somewhat larger ones on the lungs. The lymphatic glands, which are found in the flank, along the intestines, and between the lungs and which are a light amber color in health, will be found congested and varying from a pink to a very dark color.

Where the services of a qualified veterinarian can be obtained, he should be called to make a post mortem.



# Specials for June

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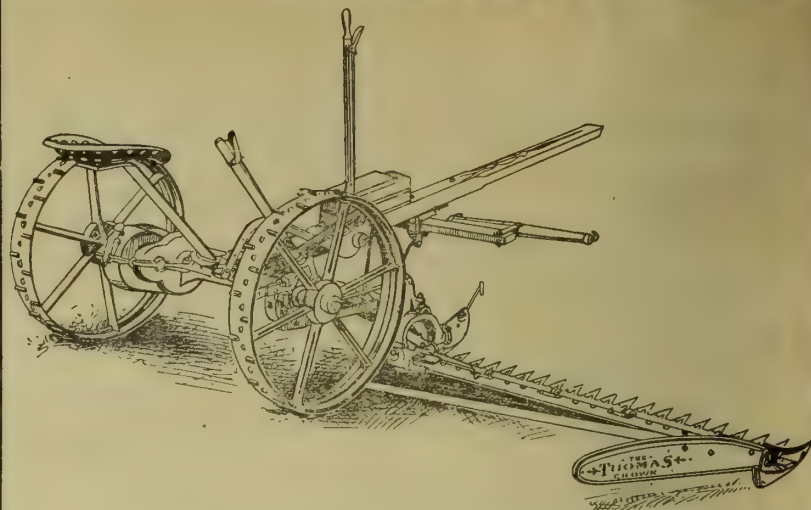
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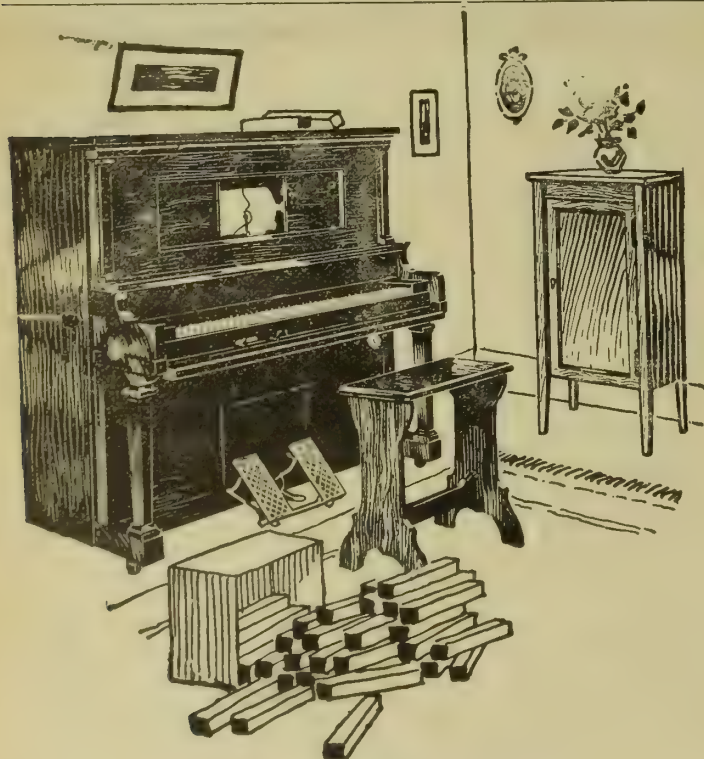


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Gentlemen:—

Send free—catalogues and information regarding your special offer on Aeolian Player-Pianos.

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## AEOLIAN PLAYER-PIANO

With Beautiful Music Cabinet and 30 Rolls of Music.

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**A FIRST PAYMENT OF \$10**

Balance in easy monthly payments. Price of Outfit \$460.

The Aeolian Player-Piano is entirely above the class of other player instruments advertised at low prices.

For price is not the first consideration in this instrument. It is the highly perfected and finished product of the largest manufacturers of musical instruments in the world—the concern known everywhere as the leader in fine player construction—The Aeolian Company. So quality is the first requirement in the Aeolian Player—quality worthy of the unqualified Aeolian guarantee.

Its wonderful pneumatic system, because of many patented and exclusive features, is unequalled in responsiveness, musical capability and ease of operation. A remarkable perfection is evident in every part that is a factor in securing musical excellence—for this Aeolian Player-Piano, remember, is the work of the men who have made all of the world's finest players.

The piano quality of the Aeolian Player is also very superior. The tone is rich, smooth and big in volume. The action is quick and well-balanced—delightfully satisfactory to the person who plays by hand. The tone experts who have made the famous Weber and Steck Pianos such magnificent instruments, have given their best skill to the Aeolian Player-Piano also, and have helped to make it one of the greatest triumphs of the Aeolian Organization.

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New upright Pianos  
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LEADING BOOK

# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region

OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE

VOLUME XII; No. 46

LEHI AND SALT LAKE CITY, UTAH

JUNE 17, 1916

## Utah State Capitol



The State Capitol building occupies one of the most commanding sites in Salt Lake Valley at the base of the historic Ensign Peak. The grounds consist of forty acres. The building, grounds and furniture has cost in round numbers \$2,700,000.

The capitol building is a massive, four story, granite structure. Four hundred feet in length, two hundred feet wide through the dome section and one hundred forty feet in width through the east and west wings.

The marble lined interior of the building is especially attractive. Hanging from the interior of the dome is a great chandelier, two of its globes giving a light equal to 750 candle power each. The 24 marble pillars which surround the rotunda of the Executive Floor weighs ten tons each.

Tourists who have seen a great many State Capitol buildings say: "This is the finest State Capitol in the United States."

Although most of the four hundred or more offices are now in use, there has not been a formal opening of the building; this will take place June 28, 1916.



# Diversity In Fruit Growing

By Prof. C. I. Lewis, Corvallis Oregon.  
(Divided into three installments. This is the third one.)

In a Hood River experiment this past summer, thirteen hogs, Duroc, averaging 73.5 pounds, made a total gain of 241 pounds in 32 days. This amounts to individual gain of 18.5 pounds and an average daily gain of .57 pounds per hog. This gain was made on clover pasture alone.

For a 30-day period on clover with .5 pound grain (rolled barley- per hog per day,) they gained 13.8 pounds per hog, or .44 pound per day.

During a 58-day period on the same clover and field peas which were mature, the same hogs made a total gain of 44.8 pounds, which amounted to a daily gain of .77 pound.

For the period of 120 days these animals made a daily gain of .64, amounting to an individual gain of 77.2 pounds and a total gain for the period of 1004 pounds.

As the hogs were of excellent stuff for such an experiment, they no doubt did well under the conditions; however, they did not have sufficient grain to make maximum gains. With about 2 per cent of grain they should have made one pound gain a day.

As they ran over three acres of clover and fed off four acres of peas, in company with twenty head of smaller animals, it is impossible to determine what income they yielded per acre of clover, or of peas.

The question is sometimes asked will not the hogs damage the trees? Yes, quite frequently they will injure young trees and there are certain individuals that need watching and re-

moving from the orchard. However, if varieties, there is less danger. If there is an abundance of feed and good apples get heavy enough so as to bring the branches near the ground, hogs will often shake off large quantities of fruit. The cull fruit is of questionable value. It is, however, worth something, but is poor for fattening.

**Dairying.**

It is exceedingly hard for an orchardist to engage in dairying on a large scale. There are a few exceptions, however. For example, a man who has abundant pasture and can raise plenty of feed, sell his milk at retail prices, and provide proper barns and pasture for his stock, will often make money. His herd, however, must be superior and he cannot afford to buy much of the food the cattle consume. An orchardist can often make very good money on from one to three cows, and begin to lose money when he attempts more. The average cow which the dairyman offers the orchardist is of very questionable value. Very few men are temperamentally suited to handle both fruit and cows successfully.

**Poultry.**

A small flock of chickens should be found on every orchardists ranch. It is only in exceptional cases, however, where large flocks of chickens will pay. If large numbers are kept, it requires much attention and most orchardists feel that the element of grain is a factor which keeps them

from going into the industry extensively.

**Sheep.**

I have felt that possibly it would pay some of our orchardists who have good crops of clover and alfalfa to attempt sheep fattening. There are sections of the Northwest where sheep can be secured in the spring of the year quite easily. There are other sections where people would be glad to lease pasturage. We have tried an experiment with sheep this last year at Hood River, but hope to try it more extensively in the future. The report of this year's experiment is as follows:

Eight head of ewes with lambs can be handled on three acres of good clover in orchards. The ewes made practically no gains, as they suckled the lambs throughout the determination. Our figures show that eight head suckling lambs that averaged 26 pounds when put on clover with mothers (single lambs) made an average daily gain of 1.2 pounds each for a period of 52 days. No correction has here been made to cover gaunt condition of animals at first weighing, and full condition at final weight.

**Horses.**

Where the fruit grower has some pasturage raising abundant hay and grain, it will generally pay him to raise his own colts, and sell off his work horses at the time they will bring the most money, and always break in new colts for his own work. It is doubtful, however, if it will pay if one has not the feed and pasture.

Kid—"How did you get the red marks on your nose, Uncle?"  
Uncle—"Glasses, my boy."  
Kid—"Glasses of what?"

**DANDELIONS IN LAWN**

The common dandelion is on the increase as a pest in the lawns. It is a very difficult plant to eradicate. It perpetuates itself by a large, fleshy root which is difficult to kill and this must be removed before one can get rid of the plant. A very common method is to dig out as much of the root as possible with a long, heavy knife, or with a tool called a spud, and then to put a few drops of coal oil on the cut surface of the roots. In many cases the coal oil kills that part of the root which remains. It is, however, not perfectly successful. Some persons have tried sulphuric acid on the roots. This is a difficult thing to handle for it is very injurious to the hands and the person. It usually kills the dandelion roots, but in some cases they escape.

Recently a good many people have tried spraying for dandelions, and this is recommended by some. The method used is to make a solution of iron sulphate, two pounds to one gallon of water. Apply this to the lawn with a spray pump so that it will make a fine mist. Some people put half an ounce of sulphuric acid in each gallon of the spray. In any event, all that this spray can do is to kill the tops. If, however, one should begin in the spring and kill the tops with the spray and then repeat the process as often as new ones appear, one ought in time to get rid of the roots by starving them out. This spray does little or no injury to lawn grass and clover. It sometimes blackens the edges of the leaves a little, but the damage is never serious. From the standpoint of cheapness and ease of application at least, this is probably the best method to use in fighting the dandelion.

## FIRST IMPRESSIONS

In music or any study you take up are the lasting ones---they should be correctly imparted by an authority on the subject in hand

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yourself or have the children study it. Distance from musical centers is no barrier—the mails have fixed that so that we can reach the most remote points easily.

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### IT IS TO YOUR INTEREST

to investigate the merits of these courses—the wonderful instruction they impart and the fact that they are the most successful of their kind. They carry the endorsement of the leading musicians.

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#### YOU—MAIL THIS COUPON TODAY

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Templeton Building Salt Lake City, Utah.  
Gentlemen:—Send free—information regarding the course checked. It is understood that I am not obligating myself in any way.

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Piano  
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Violin  
Dramatic Art  
Band Instruction



# Dry Farming Conditions In Cedar Valley

Report of J. W. Paxman, Extension Specialist in Dry-Farming for the Utah Agricultural College.

**Location—Area.**  
A few miles west of the beautiful, placid Utah Lake, separated by a range of rather towering hills known as the Lake Mountains, lies a somewhat extensive and unbroken valley 25 miles in length, running north and south, and 4 to 10 miles wide, called Cedar Valley from the fact that it is almost surrounded by cedars on the foothills adjoining. On the west are the Oquirrh Mountains which separate it from the great Rush Valley, the dividing line between Utah and Tooele Counties.

Roughly estimating there are upwards of 100,000 acres of valley and bench lands, varying in quality and character, with but two small irrigating streams for agricultural purposes, doing duty to about 1,500 acres, out of this vast stretch of country. On these streams are located the towns of Cedar Fort and Fairfield on the west of the valley with a population of 150 and 200 respectively. The Salt Lake Route has a branch line running through the valley providing a ready means of shipping its products to market.

**Character of Lands.**  
At one time when this state was ablaze with dry-farm propaganda and many people became unduly excited and imagined they saw the making of a lot of "easy money" by operating large tracts of dry-lands, most of these lands were taken up and thought to be good in character and fully capable of doing duty to the growing of dry-farm crops. As a result of this prevailing idea, unwarranted as it was by the practice of the past, several large companies at great expense commenced the operation of extensive tracts with ponderous steam plowing outfits.

The heavy greasewood lands in the lower part of the valley were selected in preference to the bench or upper lands where abound a dense growth of thrifty sage. These lands were found to be stubborn when wet and under the weight of the engine wheel while dry would be ground to powder, and run together or puddle when moistened with the rains. They proved to be treacherous in that a treatment which made for success one season, would make for failure another year. They indicated an independability owing to the peculiar characteristics of the soil. It seemed extremely difficult to keep the land in proper tilth.

These companies failed absolutely, being compelled to abandon their work at a great loss.

Unfortunately the greater part of the valley is comprised of lands similar in character, and of lands bearing shadescale. There are also stretches of light sandy lands that are poor in quality, lying principally in the eastern and southern parts of the valley. The section known as "The Sniks" appears sterile and dead. Practically all of the 100,000 acres are occupied or owned.

**The Better Lands.**  
It is estimated by the conservative men in the district that about 25,000 to 30,000 acres skirting the mountains on the north, west and south, and limited areas on the east that can be called the "sage brush belt" can be put to profitable use in the growing of dry-farm crops. Some of these lands give evidence of splendid fertility, having produced upwards of 35 bushels of wheat to the acre. The country on the north in particular is being rapidly developed, with a large acreage producing paying crops of wheat, barley, corn, sudan grass, potatoes etc.

There can be no question regarding the quality and fertility of the lands where the black sage finds a home for thrifty growth, and, barring some small areas, where the gravel is near the surface this section runs around the valley from the northeast corner to the west and south for a distance of over 30 miles, besides some choice spots on the east of the valley.

**A Stultifying Factor.**  
Some of these better lands are owned by speculators residing in Salt Lake City and other distant parts, without any disposition to operate them. They are waiting for their hard working and empire building neighbors to develop and thereby add increased value to their lands. Such owners are a hindrance to the country for they not only are parasites, but they stultify the growth and development of the country. For the good of the country that has given them their opportunity, they should let loose of their holdings at reasonable prices and permit the real developers to own them.

**Rainfall and Climate.**  
In the south of the valley the annual precipitation is recorded as a little less than 12 inches, and while there are no official records for the north end, it is stated by those familiar that there is about 20 to 25 per cent more snow and rain than in the south. It is certain that the snows

(Continued on page 6)

# Value of Manure

Enormous Loss of Fertilizing Materials May Be Prevented Through Careful Handling.

If the farmers of this country had always fully appreciated the true value of farm manure, and used it on their land, the present situation would be much less acute. The annual loss of fertilizing materials is enormous in this country through careless handling of manure. This loss can be easily prevented in a large measure by proper methods of handling. While many farmers are getting the most from the manure produced on their farms, yet many could well exemplify the European farmer in this matter, who saves carefully and utilizes every pound of manure available.

The farmer who feeds as much livestock as possible may figure that he is receiving a double remuneration from his crops: First, from the marketing of feeds through livestock; and, second, from the fertilizing substances which are left in the manure. Practically all of the nitrogen, phosphorus, and potash which is in the feeds is recovered in the manure from live stock. All landowners, farmers, and tillers of the soil should always be keenly conscious of this fact, and employ methods of management accordingly.

It is a well-known fact that the animal uses the nitrogen, phosphorus, potassium, and other elements of the feedstuffs to build up the body, carry on the work of the body and to produce milk, work, wool, etc. At the same time we must remember that all of these processes involve the building up and breaking down of body cells, and the component parts of these broken-down cells are thrown off as waste matter.

In this waste matter we have the same elements as were in the feedstuffs consumed. Except in cases of growing animals, whose bodies are increasing in size, practically the same amount of nitrogen, phosphorus, and potassium are voided in the manure as were contained in the feeds eaten. The exact percentages of these substances voided by livestock varies within wide limits, depending largely upon the age and kind of animal, amount of feed eaten, work which the animal is doing, and various other factors. A young and growing animal retains a large part of these elements in the growing tissues of the body. A dairy cow uses a portion of them in the production of milk. A hard-working horse or a mature fattening animal voids from 90 to 100 per cent of them. It is then evident that a large percentage of the elements of plant food removed from the soil by growing crops remain on the farm where these crops are fed, and that the manurial value of feeds is in direct

proportion to their composition. The following table shows the amount of fertilizing constituents estimated to be in 1,000 pounds of each of a few common feeds:

Feed	Fertilizing constituents in 1 000 pounds.		
	Nitrogen	Phosphoric acid	Potash
Corn .....	Pounds. 16.2	Pounds. 6.9	Pounds. 4.9
Wheat bran (all analyses) ..	25.6	29.5	16.2
Oats .....	19.8	8.1	5.6
Cottonseed meal (31.6 per cent protein) .....	60.2	26.6	18.0
Linseed meal (new process) ..	59.0	17.7	13.0
Corn stover .....	9.1	4.0	11.5
Oat straw .....	5.8	2.1	15.0

Under practical methods of feeding livestock all of the fertilizing substances shown in the above table can not be returned through manure to the soil. Allowances must be made for a small waste in feeding operations, the retention of some nitrogen, phosphorous, and potassium in the animal's body, and a reasonable amount of loss of these elements from the manure before it reaches the fields. With such losses in view it is safe to say that when the manure is carefully handled 75 per cent of the phosphorous and potassium and 70 per cent of the nitrogen originally present in the feeds can be returned to the soil.

From these figures and the above table we can easily compute the actual value of the manure from a given amount of a feed. We will base our values upon normal prices of fertilizing materials, as follows:

	Cents
Nitrogen, per pound.....	20
Phosphoric acid, per pound.....	4
Potash, per pound.....	5

The following table shows the actual value of the fertilizing constituents returned to the soil in the manure from 1 ton each of several typical feeds. The percentages of valuable substances saved and the prices of fertilizers as indicated above are used to calculate the values in the table.

For example, let us say 1 ton each of corn, cottonseed meal, and corn stover has been fed to fattening steers. From the above table we find the value of the manure from these feeds to be \$28.71. This amount represents approximately one-half the value of the feeds consumed. No allowance has been made for bedding material, which has some value as a

(Continued on page 7)



## DAIRYING

### WESTERN CHEESE

#### Dairy Specialists Study Cheese-Making Possibilities in the Rocky Mountain States.

The possibilities of cheese making in different sections of the Western States, particularly on the irrigated projects, received considerable attention from specialists of the department during the summer of 1915. A representative of the Dairy Division spent a number of months among factories in Idaho and Montana studying the troubles experienced in making cheese of a satisfactory quality, and in seeking means of overcoming these difficulties.

In Idaho very successful factories are now in operation near Boise and Buhl. At Boise a large co-operative company owns two cheese factories and one creamery. The cheese factories have proved so popular with the farmers that the company intends to build other factories of the same kind. The factory at Buhl at one time last summer paid 11 cents a pound more for butter fat than was paid in any other market in the same locality, and at no time was this difference less than 6 cents.

Owing to an inadequate milk supply and poor management, there have been failures of cheese factories in both Idaho and Montana. The climate and all other natural conditions, however, are good for a cheese industry throughout Montana and in the higher parts of Idaho. On the intensively farmed irrigation projects the dairy cow furnishes a good medium through which to market the bulky crops of alfalfa and corn.

The prices which a cheese factory is able to pay for butter fat, in competition with other markets, can readily be estimated if the price of cheese is known. Milk makes 2.7 pounds of cheese for each pound of butter fat. The cost of manufacture is about 2 cents a pound in factories of ordinary size. Cheese at 13 cents a pound would allow the payment of 29.7 cents a pound for butter fat; at 14 cents for cheese, 32.4 cents for fat; at 15 cents for cheese, 35.1 cents for fat; and at 16 cents for cheese, 37.8 cents would be paid for butter fat. During the past summer great quantities of cheese were sold in the Rocky Mountain States at a price higher than 16

cents a pound, while probably none brought less than 13 cents.

In certain localities, some farmers not familiar with cheese factories are inclined at first to oppose the industry because it uses skimmed milk formerly available for calves and hogs. This opposition is not well founded, as nearly every farmer in the great cheese-factory district of Sheboygan County, Wis., is able to raise excellent dairy cows. The irrigated regions of the West, moreover, produce great quantities of alfalfa, which furnishes a cheap substitute for the protein of skimmed milk for pigs. Experiments by the New Mexico Experiment Station have demonstrated that where alfalfa pasture is available and corn is worth 80 cents a bushel, a hundredweight of skimmed milk is worth only 14 cents, as compared to nearly 30 cents where there is no alfalfa. It is probable that with pigs on alfalfa pasture they would give almost as great gains as would skimmed milk.

In the flush of the season a cheese factory can be operated economically on 3,500 pounds of milk, or the product of about 200 cows. This milk should be produced within 4 miles of the factory, as a longer haul is not economical and increases the danger of bad milk and poor cheese. A cheese factory to handle 5,000 pounds of milk can be built for about \$1,500, including equipment.

As so little of the country is naturally suited to the manufacture of cheese, and as the possibilities of increasing its consumption are so great, the department believes that, as a rule, consideration should be given to establishing factories wherever conditions are favorable to the development of this industry.

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**PASTURES FOR THE DAIRY COW**

By Fred W. Merrill.

After dairy cows have been fed dry foods all winter the first green blades of grass are eagerly sought in early spring. The freedom of the pasture, the bright sunshine and the warm balmy days all contribute to the health and comfort of the cow, and every dairyman experiences an increased flow of milk, especially if he has not been feeding silage.

Many experienced men invariably turn to pasture too soon and fail to recognize the limited food value of the early grass. At this time of the year the silo emphasizes its importance. It is not an easy thing to do to get cows to eat dry hay, either morning or evening, when they have access to the pasture, but silage is eaten with a relish, and supplements the pasture—keeps up and increases the milk flow and adds to the general efficiency of the animal. In the absence of silage, grain must be resorted to, and this adds materially to the cost of milk production.

The experienced dairyman, who dairies for a profit, cannot afford to pasture, because he can invariably keep many more cows on a given

acreage by adopting the soiling method. One acre devoted to the soiling method will produce three or four times as much feed as an acre of pasture. In sections where labor is scarce and land is plentiful and cheap, the pasture method will continue to be practiced for a long time to come, irrespective of profits.

The problem, then, is to secure a pasture which will furnish palatable and nutritious food during the summer months.

The best pasture is one containing a mixture of grasses. This kind of a pasture can be obtained by planting a mixture of grass seeds and taking care of the pasture, keeping the soil well fed and cultivated so that the grasses, in turn, can be well fed.

Conditions are so varied that it is difficult to give a formula for pasture that will meet all conditions.

Under the humid and in the irrigated sections it is an easy matter to maintain a variety of grasses that will keep green during the greater part of the growing season. For such places the following will make a good pasture:

**For One Acre**

Kentucky Blue Grass.....	5 lbs.
Timothy .....	6 lbs.
Red Top .....	2 lbs.
Orchard Grass .....	2 lbs.
Red Clover (Mid-red).....	4 lbs.
Alsike Clover .....	2 lbs.
Alfalfa .....	2 lbs.

The advantage of this mixture is that we obtain a variety of feed, and some of them are green and succulent late in the summer, after the earlier ones have become matured.

**THE FARM INVENTORY**  
R. M. Green.

The best business farmers like business men in other lines take inventories regularly. Spring or late winter is the best time for taking the farm inventory as there is usually less feed on hand.

The inventory is the first step in any good system of farm accounts and will give more information in proportion to the time spent on it than any other record. The cash balance alone is a poor indication of the success of the year's business, but when the inventory is added it is possible to tell a great deal about the success of the year's operations.

Boys on the farm should help in making the farm inventory every year as it establishes a good habit and makes them watch the financial side more carefully and offers one of the very best possible lessons in practical arithmetic.

"Well, Dinah, I hear you are married."

"Yassum," said the former cook. "I've done got me a man now."

"Is he a good provider?"

"Yassum, he's a mighty good provider, but I've powerful skeeder he's gwine to get kotched at it."

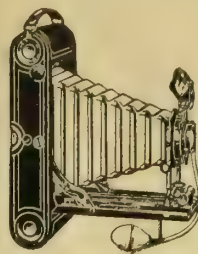
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## DRY-FARMING CONDITIONS IN CEDAR VALLEY

(Continued from page 3)

lay longer and are deeper in the north, thereby influencing the producing factors in favor of the north section. The general climate and frost-free period is much the same as Utah valley, except that the winds prevail more here and the nights are more cooling.

### Water Facilities.

One of the drawbacks to the valley is the lack of water, there being no living streams nor springs within easy reach excepting those previously mentioned, necessitating long hauls for the stock and for domestic purposes. Surface water on the north has not yet been reached although parties have dug beyond 130 feet. On the west some wells have been driven 170 to 200 feet and the water pumped with the aid of the windmill.

The State Board of Land Commissioners, a number of years ago, put down an experimental well in the south end which furnishes water to a few, and a decision was recently reached to drive another such well in the north end. If successful this will prove a boon to the farmers in the north end, where now the greater activity is displayed.

### Methods.

Here, as in most districts, the farmers evidence some impatience or a lack of knowledge of dry-farm principles, for many are trying to get quick returns. Some plow poorly and out of season when the ground is dry and expect a crop the first year, others are cropping for two, three and four years in succession. The results, of course, are poor and disappointing. Then these men swear that dry-farming does not pay. It does not pay such men nor does it respond generously to such wrongful practices. The conditions in this valley do not warrant loose methods nor a cropping every year. To guard against failure we must play a safe game—clean fallow one year; a safe crop the next with no fear. Deep plowing at proper time, a clean fallow and preparation for a good seed bed and intelligent planting, are the factors that make for paying crops and a satisfied farmer, in the Cedar Valley.

### A Fortunate Asset.

It is most fortunate for the district that it has some practical, intelligent, and leading dry-farm students among its farmers. They lend an influence and inspiration to the district that is potential and far-reaching. They are well informed on dry-farm methods and are putting to practical and beneficial use their intelligence and wisdom. Such men as President James H. Clark, Eli J. Clayson, Ernest Hindley, E. W. Southwick, Dr. Holbrook, President A. J. Evans and other practical men putting their enthusiasm and management into a sane and correct system of farming producing the maximum crops, give confidence to their neighbors and lend zest and vigor to the development of the entire district. It would be time very profitably spent for the farmers to visit the farms of these men and absorb as far as they can their conception of dry-farm methods, and get the lessons of success by studying the history of their crops.

### Conclusion.

For the past four or five years hundreds of bushels multiplied into thousands of bushels of wheat have gone to the markets from this valley.

The future will give to this district many times its present production in wheat, with additional crops of potatoes, sudan grass, and corn. The silo and livestock will find a place along the west side, much to the profit and satisfaction of the farmer, and to the permanency and wealth of the entire district.

## TUMBLING MUSTARD A

### BAD WEED PEST

By Howard S. Hammon, Oregon A. C.

While the mustard family has given us many plants that are useful for food, such as the cabbage, cauliflower, radish, turnip, kale, brussel sprouts, etc., it has also given us many of our worst weeds such as the wild turnip, the charlock, shepherd's purse, hedge mustard, and the tumbling mustard.

This plant was introduced from Europe and has become well established here in the Northwest and is one of the worst weeds with which the farmer has to contend. It is found in the grain fields, and along the roadsides. This weed is an erect, smooth, much branched winter annual from one to four feet in height. (The winter annuals differ from the annuals in that the seeds germinate in the fall and produce a rosette of leaves close to the ground. These plantlets live through the winter, send up their flowering stalks next spring, produce seeds and die.)

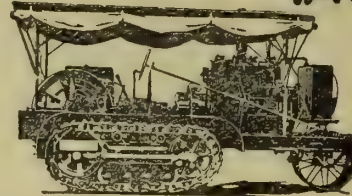
The young plants form a rosette of soft, pale, downy leaves, which are deeply cut. The leaves of the flowering plants vary greatly. The lower ones have leaf stalk, are deeply incised, and have lancelike lobes, usually covered with hairs giving that part a downy appearance. The leaves on the upper part of the stem are much smaller and have shorter leaf stalk or none at all. The uppermost leaves are long and narrow.

The flowers are borne in a loose head and are of a cream or pale yellow color. They are from one-fourth to one-half an inch in diameter, the petals being arranged in the form of a maltese cross. The flowers begin to open early in June and the plant continues to bloom for six weeks or more. It takes the plant over a month to mature its seed after the flower has opened. The seeds are borne in very slender pods which vary from two to four inches in length. The seeds are of a reddish of a yellowish color, oblong, minutely roughened with mucilaginous glands and when wet this mucilage become quite sticky, causing the seeds to stick to each other or to other objects. The seeds will average about one twenty-fifth of an inch in length.

The plant derives its name "Tumbling Mustard" from the fact that in the fall after the seeds have matured it breaks from the ground and is carried long distances by the wind. Each plant produces an enormous number of seeds—a single plant has been known to produce over a million seeds—and since they are not easily shed from the tough dry pods, the plant may be blown long distances over the range or prairie, and scatter their seeds as they roll along.

Tumbling mustard is propagated only by seed, and since it is a winter annual it will give little trouble in cultivated fields. It is more persistent in grain fields, but here it can be effectively held in check by spring harrowing or spraying. All cereals, as wheat, rye, barley and corn may

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be sprayed with a three percent solution of copper sulphate to kill the mustard without causing serious injury to the crops. (This is approximately 10 lbs. of copper sulphate to 50 gallons of water.) Spray when the mustard plants are beginning to develop their buds.

If the plants are sprayed while in bloom, increase the strength of the solution. The main points in combating this weed, as with other annuals, are to prevent the seed being sown and to prevent the plants which are on the land at present from maturing their seed.



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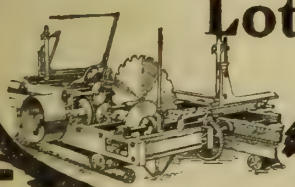
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VALUE OF MANURE

(Continued from page 3)

fertilizer, and if not too coarse, improves the physical condition of the soil.

This serves to illustrate the point that the farmer who has the requisite number of livestock can use feed-stuffs grown upon his farm or purchased to supply those elements of plant food needed by the soil to maintain its fertility; and by following such a practice consistently he can

Feed	Nitro-gen.	Phos-phoric acid.	Pot-ash.	Total value.
Corn	\$4.54	\$0.41	\$0.30	\$5.25
Wheat bran	7.17	1.77	1.21	10.15
Oats	5.54	.49	.42	6.45
Cottonseed meal (31.6 per cent protein)	16.86	1.60	1.35	19.81
Linseed meal (new process)	16.50	1.26	.97	18.73
Corn stover	2.55	.24	.86	3.65
Oat straw	1.62	.13	1.32	3.07

Value of manure returned to soil from 1 ton of each feed.

overcome to a large extent the necessity of extensive purchase and application of commercial fertilizers.


Let it be understood that the manurial values indicated in the above table are within the reach of every farmer, but not without exercising care in handling the manure produced on his farm.

The liquid portions of the manure contain about three-fourths of the nitrogen and nearly all of the potash voided by the animal. Therefore, it is highly important that as much of the liquid manure be saved as possible. This is usually accomplished by using a sufficient amount of bedding to absorb it, or by allowing it to drain into a pit or cistern of some sort. Spreading manure while fresh is generally most economical. Where this is impracticable, it should be stored under cover or in a concrete pit, and always kept well packed. "Fire-fanging" can be prevented by keeping it quite moist. Those desiring further information relative to the care and use of manures should correspond with the department of their State experiment station.

Aside from the fertilizing elements contained in manure, it has beneficial mechanical effects upon practically all soils. When properly applied, manure improves the physical condition of the soil by increasing its water-holding capacity, aeration, and temperature. While the soluble portion of the manure is at once available for plant use, other plant foods are released as decomposition continues for two or more years. This latter process assists materially in rendering available for plant use the potash and phosphoric acid which are already present in the soil, but in unavailable forms.

When the farmers of our country thoroughly appreciate the actual amounts of fertilizing constituents which are contained in farm manures, and intelligently care for and utilize the manure produced on their farms, they can save millions of dollars in fertilizer purchases; and the

Interlocking CEMENT STAVE Silos



ANDERSON FARM  
Lehi, Utah  
12x35 foot silo, 100 ton capacity. A. B. Anderson, writes that his silo is a complete success.

Information about concrete on the farm, including details as to Silo building, will be furnished free. Just sign coupon below and mail it to us.

Intermountain Concrete Co.  
OGDEN-UTAH  
Please Send Me Catalogue No.3  
NAME \_\_\_\_\_  
ADDRESS \_\_\_\_\_

YOU CAN SECURE GOVERNMENT LAND


(surveyed or unsurveyed)

WITHOUT HOMESTEADING.

by using U. S. Government Land Scrip. We can furnish any kind of scrip at market prices. We have a few hundred acres of scrip on hand which has been "APPROVED" by the Department at Washington. Scrip comes in 40, 80 and 160 acre tracts. Prices on request. ROBERT A. KEAN and CO. 5 N. La Salle St., Chicago.

necessity of depending upon the purchase of these fertilizers, followed by the occurrences of crises in the fertilizer situation such as now exists in some sections, will be largely decreased.

BEST WAY TO CLEAN BRASS  
An excellent way of cleaning brass flower pots or trays is to rub them well with a piece of lemon. Then pour boiling water over them, and finally polish them with a soft dry cloth. You will find that the lemon will remove all the stains from the crevices in the brass.—Farm and Fireside.

THE BEST \$45.00 strictly all oak tanned western Double Team Harness on earth with breeching and collars for \$36  


our new Catalog sent free

Hame tugs, 1½ inch, with three loops and patent buckle. Traces 2½ inches solid single ply, with cockeyes.

THE FRED MUELLER SADDLE & HARNESS CO., 1413-15-17-19 Larimer St., DENVER, COLO.



# Overland

TRADE MARK REG.

## \$615

Roadster \$595  
*Model 75 - f. o. b. Toledo.*

## 1,000 C

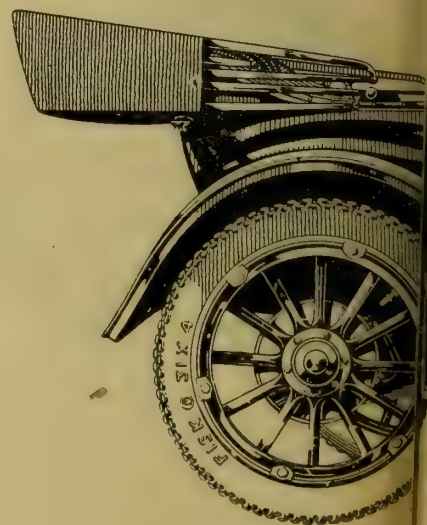
To completely realize the  
which the public has yearned for  
which producers have long  
attain—

That was the definite purpose  
behind the \$615 Overland.

A small car with comfortable  
seats that would ride as easily as  
one—

A small car with "big look"  
man could buy and yet keep  
in terms with both his pocketbook—

A small, light car that would run  
a new low level of operating and  
keep expense—



TH



# ars a Day Not Enough

ideal  
for—  
ven to

se be-

roomy  
s a big

that a  
speak-  
nd his

reach  
nd up-

That has been the ideal.

That was the definite need which the \$615 Overland supplies with definite finality.

But a luxurious small car—like most ideals—was difficult of attainment.

And to attain it and still keep the price lower than any other complete automobile had ever been sold for, meant quantity production on a scale never before attempted in cars of this class.

We increased our capacity to 1,000 cars a day—more than double any previous output of cars of this class.

And the result is this comfortable small car, beautiful and complete, for \$615.

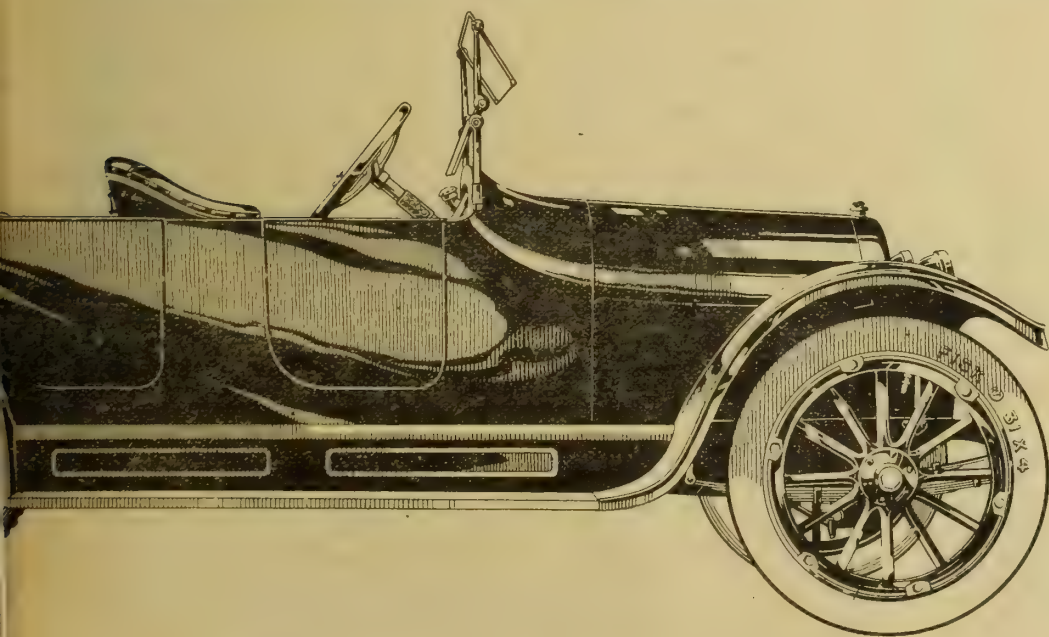
Never before has any complete automobile been sold at anywhere near so low a price.

And never before has any small, light, economical car been anywhere near so comfortable or so beautiful.

But so completely have we realized a popular ideal that 1,000 cars a day is not going to supply the demand.

If you order yours today it will not be a day too soon to avoid delay.

See the Overland dealer at once.



*Catalog on Request. Please Address Dept. 646*

**Willys-Overland Company, Toledo, Ohio**

*"Made in U.S.A."*





For Greatest Satisfaction Use  
**DOUBLE SERVICE**  
**Automobile Tires**  
Guaranteed 7,000 Miles Service  
**Absolutely Punctureproof**

Double Service Tires are made double the thickness of the best standard make tires.

This 100% greater wearing surface naturally gives that much more mileage and service. The average of 12 miles of tough makes these tires absolutely punctureproof.

These tires excel all others for use in the country over rough and rugged roads as well as on hard pavements. They are as easy riding and resilient as any other pneumatic tire—the air space and pressure being the same.

They are the most economical and "care free" tires made and are used where tires must be depended on and tire troubles cannot be tolerated. Many Double Service style tires are in use in the U. S. government and European War service.

Our output is limited to a certain amount, but for a short time we offer the following reduced special prices as an introductory offer:

#### PRICES

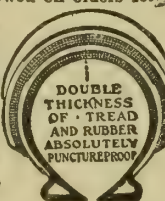
Tires Tubes	Tires Tubes	Tires Tubes	Tires Tubes
30x3 in. \$8.60	32x4 in. \$17.45	\$4.65	
30x3 1/2 in. 10.85	32x4 1/2 in. 21.20	\$6.60	
32x3 1/2 in. 12.75	30x4 1/2 in. 22.60	\$7.75	
33x4 in. 15.75	37x4 1/2 in. 23.60	\$6.90	
34x4 in. 16.70	37x5 in. 26.30	\$6.60	

All other sizes not included in above list also furnished. Non-skids at 10% additional.

Terms: Payment with order at above special prices, a 10% discount allowed on orders for two or more tires. All personal checks must be certified.

Try these tires now and be convinced of their very high qualities. Sold direct to the consumer only. Descriptive folder upon request. Write for it.

Double Service Tire & Rubber Co., Akron, O. Dept.



## THE HOME

### ABOLISH MANURE PILES EMPTY GARBAGE CANS SKIDOO "HIS FLYNESS"

Paradise for bald-headed men would result and screens, fly paper, fly traps and poison would go into discard. This is the time of the year when all enterprising municipalities are having their "clean up" days. Let us make them thorough, not forgetting the horse and cow stables and yards.

The best time to swat the fly is before he is hatched. Flies breed more in horse manure than any other place, not even excepting the neglected garbage can. To neglect these breeding places in May and buy fly traps in August is paying the price for a certain kind of unpreparedness. The price paid is not simply the "filthy lucre" that is spent for screens and fly traps, but we positively know that thousands die every summer from diseases carried by flies. In spite of this fact we still look upon the fly as a necessary evil, an annoyance to be tolerated, instead of a death-dealer to be exterminated.

Flies do not travel very far, so the fly problem is purely municipal, and there is no danger of invasion from the country. If all of the manure could be cleaned out of all the stables in a town, this month, and kept thereafter in tight manure boxes, and all garbage cans emptied twice a week, there would be so few flies this summer that we would need no screens, fly paper, fly traps or fly poison. Bald-headed men and nervous women would have the vacation of their lives—"a consumation devoutly to be wished."—Geo. H. Glover, Colorado A. C.

#### SENSIBLE WEDDING GIFTS

At a recent country wedding the presents were so beautiful and so appropriate that many persons who saw them said the pretty bride was much more fortunate than many of the brides they knew. She was the daughter of a farmer and was the bride of a farmer, so the wedding presents that would be sensible in town would be out of place in a farm house. In view of this fact and with the memory of many "misfits" at weddings they had attended not so long before the relatives and intimate friends deliberately and carefully planned their gifts so that there was harmony and appropriateness throughout the whole scheme. As the bride-to-be was entirely unconscious of the planning there was nothing contrary to sentiment to her, and the whole thing was so dainty and so satisfactory that her presents will be a delight always.

A list of pretty and useful things was made out and one and another selected some article suited to her purse in buying or making the gifts. The towels, pillow slips, napkins, dresser scarfs and all the fancy articles were selected in harmony with each other and even the china and glass were carefully matched for the new home. There were no duplicates, no misfits, no startling contrasts—nothing but good taste through the whole list. To say that the bride was delighted was putting it mildly. The things were not so valuable from the point of view of money, but they were so harmon-

ious and useful and good that she could not help being delighted.

Of course where relatives are scattered far and wide it is impossible to carry out this plan, but even with no prearranged plan for buying gifts common sense will dictate pretty and useful things rather than foolish and useless ones.

If in doubt buy something that can be exchanged if the bride gets another article just like it. This rules out novelties for merchants usually will not exchange them. But the fewer odd and novel things the bride receives the better she is off for they soon go out of style. Not long ago I saw a pretty living room positively disfigured with vases, pictures and ornaments and I knew that the poor little mistress was ashamed of the cluttered room, but she could not help herself. They were all the gifts of friends and relatives and to tuck a few of them out of sight would be to offend the donors. The room was hard to dust, hard to live in and it prettiness was overshadowed by a real clutter of things. A few would have been all right but a profusion gave the room the look of a curiosity shop.

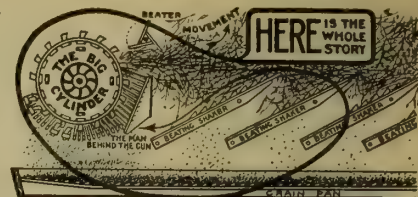
But it was refreshing to turn from this picture to that of another home that really looked scantily furnished. In the bride's linen closet were stored sheets, pillow slips, table cloths and the household things all true women love. They represented less in cost than the ornate vases and pictures of the other parlor, but they were real and genuine and lasting. The beautiful wool blankets given by an aunt will last years and years yet they cost less than the saken pillows given the other bride. Nobody dares use the expensive things fast becoming dirty, and they never can be cleaned successfully, but the blankets will go through the washing time and again and come out fluffy and soft and warm and useful every time.

At least think twice before throwing money away for ivory and silver-mounted brushes, ornate salad bowls, useless oyster forks in satin cases and all the other atrocious people think necessary for wedding gifts. Invest in good aluminum, granite, plain china or something likely to endure after the honey moon is ended. Ten to one she will rise up to call you blessed every time her eye lights on the sensible article, and if she doesn't you will still have the satisfaction of knowing you have not wasted your money, and that is worth everything. —Hilda Richmond.

#### MANNERS IN COMPANY

Much ridicule has been heaped on company manners and the people who possess them have been held up to scorn, but after all is said, there are some good things about the habits that are put on, when strangers come, and removed afterwards. If people cannot be polite on all occasions and well-bred, they at least deserve some credit for trying to hide their shortcomings from the world. And in every home there are occasions when unpleasant things must happen, no matter how refined and polite the inmates are, so company manners are exceedingly essential if family pride refrains from making the objection-

## THRESH FAST



## BUT THRESH CLEAN ALWAYS

Warehouse and elevator dockage is heavy and reduces the profit that you anticipate when fast threshing is done by a sloppy machine.

## BEAT OUT THE GRAIN THROW OUT THE STRAW, CHAFF AND DIRT THE RED RIVER SPECIAL WAY

The milling of this marvelous machine is as good as its separation of the grain.

The crop comes clean and ready for market, because it is built to do thorough work and plenty of it with every part. The mill is no exception.

## ITS WORK COMES CLEAN

There are plenty of big grain farmers who insist on having their threshing done by a Red River Special. Other machines have fooled them on net results. You had better send for a copy of the Home Edition of the Red River Special paper and find out what kind of machine your own neighbors prefer before you buy a new threshing rig. The Big Catalog may help you to make your choice. Have one sent with the paper.

## NICHOLS & SHEPARD CO.

(In Continuous Business Since 1848)

### BUILDERS EXCLUSIVELY OF THRESHING MACHINERY

Red River Special Threshers, Feeders, Wind Stackers  
Steam and Oil-Gas Traction Engines

(15) BATTLE CREEK, - MICHIGAN

## Choctaw Wrapped Tread Tires

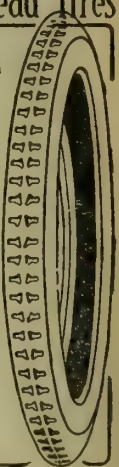
### 5000 Miles Guaranteed

Lowest-priced 5,000-mile Guaranteed Tire sold anywhere. Many users get 8,000 to 15,000 miles. Cut your up-keep expense by buying long-wearing Choctaws from us, sole western distributors. ALL FIRST-GRADERS; NO SECONDS.

Size	Plain T.	Non-S.	ALL OTHER SIZES
30x3	\$ 9.27	\$10.25	
30x3 1/2	11.92	14.04	
32x3 1/2	13.22	16.16	
34x4	20.16	23.53	PROPOR-
36x4 1/2	23.39	33.26	TION

Sent C.O.D. on Approval  
Export or Parcel P. If not right, write and we make 'em right. Careful attention to mail orders. Hundreds of satisfied mail customers.

Choctaw Tire & Rubber Co.  
(Net Worth a Quarter Million)  
1561 BROADWAY, DENVER COLORADO



## SEND US YOUR KODAK FILMS

We Develop Any Size Roll 10¢

We Develop Any Size Film Pack 20¢

Prints Made From Only Good Negatives

We Pay Postage

SHIELDS STATIONERY CO.

KODAK HEADQUARTERS

131 MAIN ST. OPPOSITE KEARNS BLDG. SALT LAKE CITY

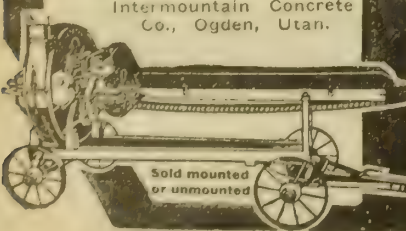


The farmer with a big, broad smile these days, is the one who was ready last fall to hustle his corn into the silo on a minute's notice, and wasn't worrying about getting it there, either, because he had a

## BLIZZARD Ensilage Cutter

The Blizzard is the tried and true cutter for the farmer. Simple, easy to run, safe. Small engine run it. Big cutting capacity and unlimited elevating capacity. Self-feed table saves one man. Steady as a clock. Many in use after fourteen and fifteen years. Repair expense very small.

Come in—get a catalog and let's talk over the Blizzard  
Intermountain Concrete Co., Ogden, Utah.



## DAISY FLY KILLER



placed anywhere, at this time kills all flies. Neat, clean, ornamental, convenient, cheap. Lasts all season. Can't spill or tip over, will not soil or injure anything. Guaranteed effective. Of all dealers or sent prepaid for 20c. HAROLD SOBERS 150 De Kalb Ave. Brooklyn, N.Y.

## RAT CURE

TABLETS

ONLY RATS WILL EAT

TRY BEFORE YOU PAY

KILLS 4 RATS FOR 1 CENT

MORISPRITE MFG. CO., Dept. F Broomfield, N.J., U.S.A.



## RELIABLE FARM BARGAINS

750 acres near American Falls, Idaho, at \$50.00 per acre. This place is represented to us as being an excellent cattle ranch with an abundance of free range close by. 400 acres under cultivation and all can be cultivated. Has an abundance of free independent water. Soil is a dark sandy loam ten feet deep, making it one of the best agricultural as well as stock farms we have in the Snake River Valley. Can be exchanged for Salt Lake City property.

78 acres at Elwood. This land is all under cultivation and is some of the best land we have in this part of the country. The owner met with an accident and for that reason is very desirous of selling at a very reasonable price. It can be had for \$115.00 per acre, good terms. This property will have to be taken within the next few weeks or we will be unable to sell it.

We have 40-80 or 160 acres of Carey Act land on the Big Lost River. Will sell at \$35 per acre; 10 per cent down, 10 per cent each year at 6 per cent on deferred payments.

5½ acres on 5th East between 15th and 16th South with a 4-room house, good cellar, chicken coops and other outbuildings. Would like to exchange for a house in Salt Lake City. If you are desirous of getting a few acres close in, call and see us and we think we can make a trade with you.

2 acres near 15th South and 4th East. This is a very choice piece of ground and can be had on ten years time at 7 per cent interest. Purchase price is \$950.00.

KIMBALL & RICHARDS  
"Land Merchants"

56 and 58 So. Main St.  
Salt Lake City Utah.

Phone-Wasatch 963.

## Merit Wins

—whether it be in peanuts or automobiles. We always bear this fact in mind when manufacturing Utah-Idaho Sugar. We know that in order to secure a lasting success we must make a superior article. We are determined to produce a product that will stand as an example for others. After years of experimenting and painstaking care we have achieved our aim—we have produced "the standard of sugar perfection."

If you haven't tried Utah-Idaho Sugar you should. You'll find it better than you think. It's a home product, and has no superior in the world. Get a sack today.

**UTAH-IDAHO SUGAR**  
ABSOLUTELY PURE

able scenes public property.

Every sane person knows that children must be corrected, even punished with some degree of severity at times, if the home is to be harmonious, but not every one has learned that punishment before strangers is dreadful. Common politeness should teach all parents to refrain from scolding or punishing children in the presence of guests. Over and over again a visit has been spoiled because the father or mother, sometimes both, corrected the boys and girls publicly. On those occasions the guest feels humiliated and unhappy. The parents imagine themselves firm and strong on government, when in reality they are defeating the very end at which they are aiming. If a child grossly offends it is easy to quietly lead him from the room and administer punishment in secret, not even allowing other children to witness the necessary scene, or else to banish the "sinner" so quietly and effectively that no one else notices that he is going.

A mother who had perfect control over her children never by word or sign betrayed her annoyance when they were doing things they had been taught were wrong or impolite, but with pleasant voice sent them on some errand from the room (they knowing perfectly why they were sent), and not returning until ready to behave. Being very human boys and girls, they often got into trouble, but no guest in the home ever suspected what was going on. All disagreements between parents should be carried on in strict seclusion, not even the children hearing the discussions, and particularly strangers.

Then there are the people who make guests uncomfortable by confiding the shortcomings of the family to them. One of the most uncomfortable neighbors I ever had insisted upon coming in to tell all her troubles, and yet that very woman would have laid down and died for her family, willingly. And people who ventured into her home never saw anything but apparent kindness and good-will toward each other there, though they were singularly quiet and reserved. It was only when she had a listener who could not escape that she seemed to delight in telling the sins and failings of her relatives.

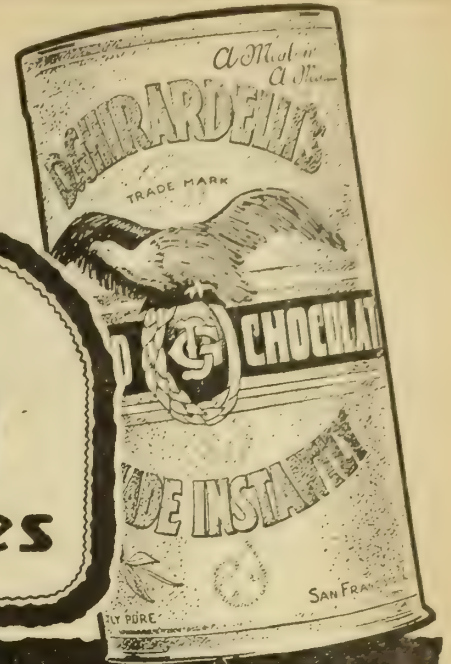
There may be some curious souls who delight in finding out family failings and listen eagerly to disputes that never should occur in presence of guests, but most persons do not go visiting for that purpose. Moreover, once you get the reputation of ignoring the rules of politeness before strangers, no matter how you behave yourself toward the home folks, your list of friends will dwindle sadly. Of course, the ideal way is always to be refined and well bred, but if you must on occasions lose your temper and show off, for mercy's sake don't do it publicly. Have a little respect for your family, your friends and yourself, and work off your anger privately.

The best of us forget ourselves at times, and do things we are everlastingly ashamed of afterwards, but let us keep the best side toward the critical world even though people do accuse us of having manners only for company.

## HE BARQUED

Willie was struggling through the story in his reading lesson. "No, said the captain," he read, "it was not a

-this  
**CAN**  
Guarantees



A standardized uniformly superior chocolate—a product protected from the time it is packed in hermetically sealed cans until the last spoonful is used. Please your palate and safeguard your health by ordering the best—

## GHIRARDELLI'S GROUND CHOCOLATE

In ½-lb., 1-lb. and 3-lb. hermetically sealed cans.  
There's a double economy in buying the 3-lb. can.

**D. GHIRARDELLI CO.**

Since 1852

San Francisco

OPENED JAN. 15<sup>TH</sup>, 1913



"The HOTEL that's BEST  
In all the WEST"

WHEN IN LOS ANGELES

STOP at the NEW  
FIRE PROOF

**HOTEL NORTHERN**  
EUROPEAN  
200 OUTSIDE ROOMS  
150 WITH BATH  
420 W. 2<sup>ND</sup> ST. NEAR HILL  
NORTHERN HOTEL CO., PROP.  
FRANK L. CRAMPTON, MGR.  
RATES \$1.00 PER DAY AND UP

CAFE  
IN CONNECTION

sloop; it was a larger vessel. By the rig I judged her to be a-a-a-a—"

The word was new to him.

"Barque," supplied the teacher.

Still Willie hesitated.

"Barque!" repeated the teacher,

this time sharply.

Willie looked as though he had not heard aright. Then, with an apprehensive glance around the class, he shouted:

"Bow-wow!"



## That Good Taste

Certainly fruit that is canned at home tastes just right—and it's always economy to can fruit. Every housewife realizes that the place of home-canned fruit on the family diet list can only be taken by some food that is more expensive—while the food value of both the fruit and sugar is greater in proportion to the cost.

### CAN FRUIT AT HOME

## Buy Your Health By the Loaf

Once you taste Royal Table Queen Bread you will want it for breakfast, dinner and supper—the more you eat the better you feel.

"Royal Table Queen" is easily distinguished from other breads by its appetizing freshness and its rich bread flavor.

Science at the Royal Bakery has struggled for years to produce a perfect bread, and it has succeeded. Thousands who once thought home-made bread could not be excelled, now prefer

## ROYAL TABLE QUEEN

"The Perfect Bread"

Four top grades of flour, pure milk, selected yeast, etc., are the principal ingredients of "Royal Table Queen." When mixed thoroughly it is baked to a rich brown color in specially constructed moist-heat ovens.

Can you wonder that the users of "Royal Table Queen" enjoy good health? Leave a standing order with your grocer for fresh



Royal Bread—every day. Flags of all Nations and beautiful pennants FREE with the large loaves.

**Royal Baking Co.**  
Salt Lake City

When you answer the advertisements in this paper tell them you saw it in the Utah Farmer. Always buy advertised goods.

### PRODUCTS USEFUL TO MAN

Grains and grasses are the most useful products to the world when properly used. And that is when fed to livestock. The animals of the farm should be regarded as living factories that are continuously converting their feed into products useful to man. A fact of great economic importance is that a large part of the food they consume is of such character that humans cannot directly utilize it themselves.

Among the products yielded by the farm animals are not only articles of human diet, such as meat, milk and eggs, but also such materials as wool, and hides, which are needed for clothing and other purposes. Another product of even greater aggregate money value than any of these is the work performed by horses and other draft animals. Altogether the farm animals of the United States yield each year products worth over \$5,000,000,000, a sum nearly as great as the value of all the crops annually harvested on our farms.

As the population of our country becomes more dense, most naturally and properly a small portion of the crops raised will be fed to animals and a larger part consumed directly by humans. This change must come with the increased demand for human food, since even high-producing animals are able to convert only a part of the feed they eat into food for our consumption. Accordingly, with our increasing population, we should expect the census statistics to show that the number of animals on our farms was failing in some degree to keep pace with the increase of people. The actual decrease in farm animals compared with population is, however, surprising. While the population of the United States increased 21 per cent during the decade, 1900 to 1910, the number of cattle and sheep decreased, and the number of swine increased, but slightly. This indicates that if animal products are to hold their present important place in the diet of our people, American farmers must more thoroughly appreciate the basic advantages of stock farming and better understand the principles and methods which are essential to its success.

Lured by the high prices which have ruled for grain and other crops in recent years, many farmers all over the country have sold their crops for cash, rather than following the wiser plan of marketing a portion through the feeding of livestock, and thereby maintaining a balanced agriculture. Seldom have they realized that with every ton of grain thus sold they are removing from their farms \$7 to \$8 worth of fertility. The loss through such mining of the soil is gradual, but in a comparatively few years there will result none the less surely worn-out fields, lacking in plant food and humus, which must ever afterward be fed with fertilizers to secure fair crops. On the other hand, if a part of the crops are fed to livestock and proper care taken of the resulting manure, most of the fertility may be retained on the farm and the need of commercial fertilizing constituents are usually purchased and fed on the farm, the land will even become richer and more productive year by year.

Start with a few dairy cows then increase the number and quality as fast as possible.

## Louden Garage Door Hanger

Low Enough In Cost for the Cheapest Garage  
Classy Enough In Appearance For the Most Particular Buyer.

No clumsy swinging doors; no posts in the yard; no waste space in the garage, that's the LOUDEN SPECIAL GARAGE DOOR.

It is hinged in three sections and hung on roller bearing swivelled trolleys. Slides around the corner "as slick as grease," and lies flat against the side wall when open.

One section swings like an ordinary hinged door; no special foot entrance necessary.

Don't worry about the door fittings; we furnish everything but the lumber—track, hangers, hinges, stay rollers, handles, hasp and staple, nails and screws.

It's a big "buy" for a small price. Ask us for Booklet No. 9.

## MILLER-CAHOON COMPANY

Murray, Utah

Idaho Falls, Idaho

## Summer Excursions East and West

Via



### Sale Dates:

May 13, 17, 20, 24,  
27, 31; June 3, 7,  
10, 14, 17, 21, 24,  
28; July, 5, 12, 19,  
26; August, 2, 9,  
16, 23, 30;  
September 6 and  
13.

### Limit:

October 31st. 1916

Sale daily May 1  
to September 30  
inc.

### Limit:

October 31, 1916.

Following round trip fares will apply from Salt Lake City or Ogden:

Denver and Colorado Springs.....	\$22.50
Omaha or Kansas City.....	40.00
St. Louis .....	51.20
Chicago .....	58.00
Memphis .....	60.00
Minneapolis or St. Paul.....	56.44

Proportionately low rates from and to many other points.

Following round trip fares apply from Salt Lake City:

Spokane, Portland and other intermediate points .....	\$42.00
San Francisco or Los Angeles direct .....	40.00
San Francisco via Portland one way .....	58.50
Los Angeles via Portland one way .....	68.50
Tacoma .....	47.80
Seattle .....	49.50

See agents for further details.

### CITY TICKET OFFICE,

Hotel Utah,  
Salt Lake City.





Combined with the  
Deseret Farmer and Rocky Mountain Farming  
Established - - - - - 1904

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#### OFFICES

All mail should be addressed to the Utah Farmer  
Lehi, Utah Kirkham Building.  
Our office at Salt Lake City, Utah,  
is at 417 McIntyre Building.



New York Office 5th Ave. Bldg.  
S. E. LEITH, Mgr.

Chicago Office Steger Bldg.  
TOM D. COSTELLO, Mgr.

St. Louis Globe-Dem. Bldg.  
C. A. COUR, Mgr.

**Change in Address**—When ordering a change in the address, subscribers should be sure to give their former as well as their present address, otherwise the address cannot be changed. This is a matter of importance to you and to us.

#### OFFICIAL ORGAN

Utah Horticultural Society, Utah State Dairymen's Association, Utah State Bee Keepers' Association, Bear River Valley Farmers' Protective and Commercial Association, Agricultural College Extension Department and Utah State Fair Association, Utah-Idaho Millers' and Grain Dealers' Association, Utah Fruit Growers Association.

#### OUR GUARANTEE

We guarantee every subscriber against loss thru dishonesty or attempted swindle by any advertiser in this publication. We do not attempt, however, to adjust trifling differences between the subscribers and honest responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within thirty days from date of the transaction, and the subscriber must have mentioned Utah Farmer when writing the advertiser.

**Advertising Rates**—The advertising rates will be sent upon application.

When you are planning a new home, or any changes in the old one, see that a good equipment of plumbing for the bath room, kitchen and laundry are made part of the plans. A modern home is not complete without these improvements that help for comfort and sanitation.

When you take your jug of water to the field, think of the horse and that he gets thirsty. It is a long time on a hot dry day from morn until noon and noon till night. Fill an old milk can and show mercy to the horse that is working for you.

Fight the weeds as you would an enemy who would take your money. The weeds will rob your land and prevent a better crop so keep them down. When cultivating to destroy the weeds you are helping the crops to grow.

Provide plenty of fresh water for your animals. Not only for the dairy cow but for all the livestock. You know what a cool refreshing drink of water means to you during the hot weather—well—think of your livestock about the same way.

We have every reason this year for a great celebration of the 4th of July. The programs should be arranged so as to inspire patriotism. Let the young people know what it cost for the liberty we are enjoying. In many places the celebration of the 4th is an occasion of going to the resorts or mountains. Why not arrange a program that will keep every one at home.

There are so many ways to help ourselves that we are getting behind the times if we do not do something each day in the way of education. Emerson said: "A man can gain a liberal education by reading fifteen minutes a day." We have changed our idea of education. Formerly it meant polish, accomplishments, a profession. Today we believe in an education of efficiency. A man who "Knows his job," who knows how to keep well, who knows how to make a living is considered educated. Good books and good papers should be found in every home and should be read by everyone.

#### PROMOTERS AGAIN

It seems to us that right now is the time to call our readers attention to the smooth tongued promoter who is always ready to take your money and cares little of what you get in return. Mining stocks just now are on the boom, be careful of the man who is so willing for you to make two or three hundred percent on your money. If he were so sure about this increase he would not want to sell to you at all. Mining promoters are not the only ones in the field, others are trying to sell the farmers stock in this or that company. You can afford to go slow, be careful before you buy stock in any company or concern that strangers come to you trying to promote.

There is plenty of money for legitimate, carefully managed businesses—but people with money do not lend money to promoters. Don't take any chances.

#### "BACK TO THE SUN"

This new cry of "back to the sun" means just as much to the farmer and his family as any one. It is a good call and those who hear and obey are assured better health, greater efficiency, longer lease on life, more joy in living and will result in better returns from their daily toil.

More continuous hours for children and parents in the sunlight means better health.

Live out of doors in the fresh air and sunlight. Sleep out of doors and awake with the sunlight. The movement costs so little and is worth so much every one should join it.

#### PLENTY OF WEEDS

Do you know of another month in the year when weeds grow more luxuriantly than June. If this is true there is no other month when you should fight the weeds harder than during the next 30 days. There is no better time to get rid of them than right now. If allowed to make considerable growth they are hard to cultivate. Once they are well rooted the fight is that much harder. They should be overcome while young and never permitted to go to seed.

Take enough interest in your own farm and that of your neighbors and mow down the weeds on public highways or roadsides. Weeds will destroy your crops to the degree that you allow them to grow on your farm. It takes good hard strenuous work to fight the weeds but it pays in hard cash at the end of the season.

#### WANTS ENGLISH IN PERSCRIPTIONS.

A noted professor of pharmacology in one of our eastern colleges has started a campaign for the use of English in the writing of perscriptions, instead of Latin which has heretofore been used.

Opinions have been secured from leading medical men, medical teachers, and state boards

of health, and the majority of them are in favor of the use of English instead of Latin. It would oftentimes be a surprise to many of us if we only knew what was contained in the perscription that we are asked to take. It seems to us that this is another step forward in the right direction. A few drug stores and doctors may not take favorably to this proposed change.

#### DO YOU WANT TORRENS SYSTEM?

We frequently hear someone complaining because they have had to pay an attorney to correct or adjust some technical detail found in the title of their land. If one decides to sell his place, or to make a loan, all of these technicalities must be adjusted before the transfer can be made. The Torrens System of land titles is being advocated by a number of people. Many of them have come from where this system has been in use for a number of years. There seems to be so much red tape attached to the present system that if a better way could be found, it would be acceptable to both the buyer and the seller. If a change in the land title is to be made, now is the time to consider it, and have such a law passed during the next legislature.

#### "A SILO ON EVERY FARM."

The farmers and dairymen of Utah were slow to take hold of the silos. The past few years has shown a wonderful change and now we are building many silos. The farmer who can feed his dairy cows a balanced ration of ensilage and alfalfa hay is securing better results.

Recent tests at several experiment stations have demonstrated that silage is not only a valuable feed for dairy cattle, but that it is good in the economical beef and mutton production, and that it can be used to good advantage as a feed for horses. Protect yourself against a possible shortage of pasture or severe drought, by putting up more silage than will actually be needed during the winter months. Corn silage will keep from one year to another if properly put up.

There are many advantages of having a silo on the farm, some farmers go so far as to say that the cost of building one is saved during the first year. Farmers who do not have a silo will do well to investigate the value of having one on the place.

#### TO ALL SUBSCRIBERS

Word has come to us that a number of our subscribers have not received their premiums. That some have only received part of the papers we offered in a combination with ours some time ago.

Our aim is to be prompt and careful in filling all subscription orders. Sometimes when they are mailed direct from publisher or manufacturer we have no way of checking up and only when our subscribers report to us that they have not reached them.

If there are any who have not received their premiums or papers we gave in combination with the Utah Farmer, we want them to write us giving details and we will see that new ones are sent to you.

Once or twice we have had more call for a certain premium than we had in stock and had to wait for another shipment but we always see that every order is filled.

Will you help us by reporting when premiums fail to reach you.



## POULTRY

### TO CONTROL INTERSTATE SHIPMENT OF ADULTER- ATED EGGS

Department of Agriculture Gives Notice That Shipments Containing More than Five Per Cent of Bad Eggs Will Be Regarded As Violating the Food and Drugs Act—Suggests That Country Shippers Candle Eggs Intended for Interstate Commerce.

The Department of Agriculture has had under consideration for some time the application of the Federal Food and Drugs Act to the shipment in interstate commerce of the eggs in the shell, especially the two classes of eggs known in the trade as "current receipts" and as "rejects" from candling rooms. "Current receipts" contain at different seasons of the year varying proportions of eggs which are filthy, decomposed, or putrid. "Rejects" from candling rooms, as a rule, contain large proportions of eggs which are filthy, decomposed, or putrid, and very small proportions of eggs suitable for consumption.

Under the Federal Food and Drug Act, eggs, in common with other articles of food, are adulterated if they consist wholly or in part of a filthy, decomposed, or putrid substance. Section 2 of the Act prohibits the shipment in interstate commerce of foods which are adulterated and it is plain that this prohibition applies to the shipment in interstate commerce of "current receipts" or of "rejects" from candling rooms or of any other grade of eggs in the shell unless the filthy, decomposed, or putrid eggs have been removed.

In the opinion of the Department,

eggs which contain yolks stuck to the shell, moldy eggs, black spots, mixed rots, addled eggs, black rots, and any other eggs which consist wholly or in part of a filthy, decomposed, or putrid substance, are adulterated.

The investigations of the Department have shown that it is commercially practicable, by the method of candling, to eliminate from any given shipment most of the eggs of the kinds which the Department regards as adulterated. It is not the practice of the Department, however, to base proceedings under the Food and Drugs Act on shipments of eggs unless there are present larger percentages of bad eggs than are ordinarily present in recognized commercial grades of candled eggs. The Department is informed that cases of eggs are not allowed to receive even the lowest candled egg grades if the cases contain more than one and one-half dozen or 5 per cent of bad eggs. Country shippers who are not certain of the freshness of their eggs should candle them before shipping them in interstate commerce.

#### Bad Eggs Must Be Denatured.

Eggs which are adulterated may be shipped in interstate or foreign commerce for use in tanning or other technical ways without violating the provisions of the Food and Drugs Act only if they are first denatured so as to render them incapable of being used for food. Since it is impracticable to denature eggs in the shell, adulterated shell eggs must be broken out and denatured prior to shipment. The views of the Department with respect to the denaturing of eggs are stated in Bureau of Chemistry Service and Regulatory Announcements No. 7, paragraph 19, and No. 12, opinion 102.

#### PRESENT GOOD TIME FOR WATER GLASSING EGGS

Formula For Preparation of Mixture Which Will Keep Eggs From Spoiling.

Market reports show that eggs have not been as cheap as they are at the present time for several years. If you are going to preserve eggs this year, why not do it now when the price is down. You are more certain of gathering a fresh product than you will be two months from now.

The most successful method yet devised is by the use of water glass (soluble sodium silicate). The formula recommended when eggs are to be kept for a period of eight or nine months in one part water glass to nine parts water. The water should be boiled or distilled to remove all impurities, and cooled before making up the mixture. If eggs are to be kept only a short time, a one-to-fifteen solution over the top layer of eggs.

Water glass secured from a local druggist costs about 50 cents a quart and used in the formula one-to-nine will preserve approximately 20 dozen eggs. Glazed earthenware jars make the best containers. They can be left uncovered in a cool cellar providing there is at least two inches of the solution over the top layer of eggs.

Infertile eggs are usually considered the best for the purpose, but at this time of the year fertile eggs will give equally good results if gathered regularly and kept in a cool place prior to preserving. A very good plan is to make up the solution and add the eggs as they are gotten each day until the jar is full.—C. S. Anderson, Colorado A. C.

## A Growing Industry

### RAISING ALFALFA SEED

10,500 acres of Utah land in 1913 produced approximately 33,500 bushels of Alfalfa seed—about 3½ bushels per acre. The 1915 crop of Alfalfa seed sold last fall for an average price of \$9.60 per bushel.

### HERE IS YOUR OPPORTUNITY

A farm of 50 acres in a fertile section—soil a rich black loam—raises bumper crops of Alfalfa. Very suitable for the successful raising of Alfalfa seed.

Can be bought for less than \$4000.00 on good terms.

### PRIOR WATER RIGHT—\$1.00 PER ACRE WHEN USED

Owner has other interests which necessitate the sacrificing of this valuable farm.

LOOK IT UP TODAY before it is too late. See or write to

**W. C. ALBERTSON**

604 Dooly Bldg.

Salt Lake City, Utah

## You're the man

who should wear

**Scowcroft's**

"NEVER-RIP" OVERALLS

and

"MADERITE" WORK SHIRTS

**BECAUSE**

They have greater wearing strength, more comfort and longer life than other makes—and they are UNION MADE.

You buy work clothes for comfort and service. You get the utmost of these in

"NEVER-RIPS" and "MADERITES"

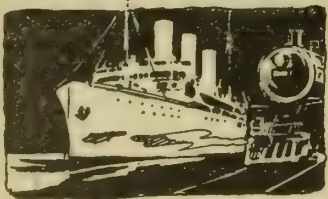
You buy satisfaction if the label says

**SCOWCROFT'S**

John Scowcroft and Sons Co.

Ogden, Utah.

The Utah Work Clothes Mfgs.



**To San Diego and  
San Francisco**

VIA LOS ANGELES  
and rail or steamer

**\$40.00 TO SAN DIEGO**  
or SAN FRANCISCO  
and return

ON SALE DAILY beginning  
MAY 1st.

Liberal Limits and Stopovers  
BEAUTIFUL SAN DIEGO  
EXPOSITION  
OPEN ALL YEAR

J. H. Manderfield A. G. P. A.  
10 E. 3rd South St.  
Salt Lake City, Utah.






# THE FARMERS' MARKET PLACE

**For the Buyer**

This market place offers our subscribers and readers a very good place to advertise. If you have something to sell or want to buy here is the place to tell it. These advertisements are read because they offer bargains, your bargain should be here. Take advantage of this opportunity today.

**For the Seller**

## Gem Herd of Improved Chester White Swine.

This Herd Bred, Raised and Sold. Both Boar and Sow Grand Champions of the World's Fair held at Frisco this last year. Both Sire and Dam, is still in the herd. If such breeding interests you, write for illustrated catalogue. Stock of all ages for sale at all times.

Address

**GEO. H. LAWSHE**  
Falls City Idaho

## HOLSTEIN BULLS FOR SALE

Sons of Wachussetts Creamelle George the 2nd whos daughters have made from 350 to 500 pounds of butter fat a year just with ordinary care. Wachussetts was 2nd prize aged bull at the State Fair last fall and all of his get were first in their class but one. His dam gave 105 pounds of milk in a day that tested better than 4 per cent. No. 1 Iowana George 3rd a fine 18 months old son of Iowana Colanth Alberkerk. A high testing heifer from Iowana Farms, Iowa, her dam has a 19 pound record. This young bull was Junior Champion at the State Fair. The first check for \$200 takes him. No. 2 Wachussetts Beauty a 12 month old son of Maudeline Of Beechwood Beauty with a 23 pound butter fat record, milk test 4.6. She is a full cousin to Colantha 4ths Johana, \$150 buys this one. Take no chances, get a bull from a proven sire and one that has produced the goods. Offer several others from 6 months to 1 year old from \$75 to \$125 each.

J. W. STUBBS

Charleston Utah

## BATES AND SONS

Provo, R. F. D. No. 1.

Breeders of S. C. White Leghorns and R. I. Red fowls and Airedale Dogs.

## BOURBON RED TURKEY EGGS

At rate of 3 for a \$1.00 or 10 for \$3.00.

Order from this ad.  
B. F. ELIASON

Moronl Utah

Mention Utah Farmer when you write

## UTAH HATCHED WHITE LEGHORN

BABY CHICKS \$11.00 PER 100

Circulars, order-blanks, etc., upon request. Candee Colony Brooders carried in stock.

## GLENWOOD EGG FARM

R. D. 3 Murray, Utah

## 40 PER CENT OFF

on eggs for hatching for balance of season and on breeding stock as long as they last.

## 4 BEST LAYING STRAINS

R. C. Reds and White Wyandottes S. C. Black Minorcas and White Leghorns Stock sold on approval. Infertile eggs replaced free of charge. Now is your chance to get a Bargain. Write

E. C. BLANPIED

Box 60 Milford, Utah

**BABY CHICKS & HATCHING EGGS**  
White Leghorns, Brown Leghorns, Barred Rocks, R. I. Reds, Black Minorcas, Anconas, Buff and White Orphingtons. Prices on application.

## THE ORLAND HATCHERY

Orland, Glenn Co. California

## ONE ACRE

Good land between 13th and 14th South for quick sales; \$425, \$10 cash, \$10 per month.

9 acres between 13th and 14th South, good for dairy or gardening. Can cut into lots later; only \$400 per acre, \$200 cash, balance easy, or might trade.

**GEO. M. DANLEY**  
Was. 2989.

707 Walker Bank Bldg.  
Salt Lake City, Utah.

## Money to Loan

On improved farms with primary water rights, at reasonable rates.

Quick Service.

We lend our own funds.

**INTER-MOUNTAIN LIFE  
INSURANCE CO.**

Home Office

11th Floor Boston, Bldg.  
Salt Lake City, Utah.

## A Bargain

Ideal City Home of Ten Rooms, elegantly furnished with all modern improvements and conveniences, located on paved avenue, east side residence section of Salt Lake City, for sale reasonable. For particulars, address 236 Atlas Block, Salt Lake, Utah.

## GOING OUT OF BUSINESS

Duroc Jersey pigs for sale \$5.00 each, two months' old. Two old imported boars and three sows to be sold at a sacrifice.

H. RONNENBERG

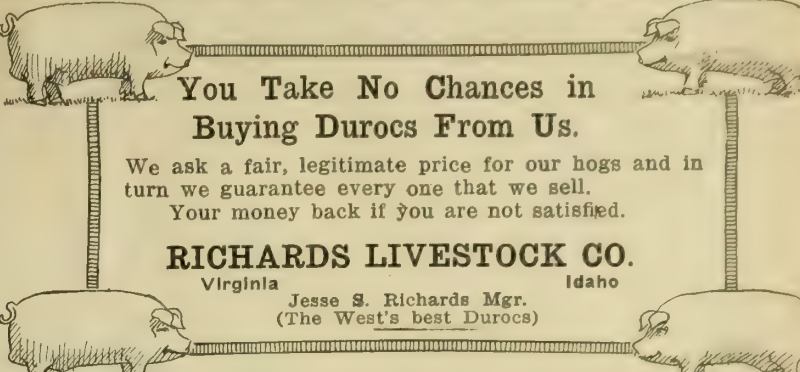
R. F. D. No. 3 Murray

As good as new, has not had four months use, a No. 5 Oliver typewriter for sale cheap. Address D-201 East Broadway, Salt Lake City, Utah.

## RANCH, \$20 PER ACRE

1,500-acre ranch, well improved abundance of free range adjoining, equipped with machinery, etc. Good herd of cattle can be bought with ranch. Price, \$20 per acre. Will take good farm as part payment.

**FEDERAL LAND COMPANY**  
Eccles Building Ogden, Utah



**You Take No Chances in  
Buying Durocs From Us.**

We ask a fair, legitimate price for our hogs and in turn we guarantee every one that we sell.  
Your money back if you are not satisfied.

**RICHARDS LIVESTOCK CO.**  
Virginia Jesse S. Richards Mgr. Idaho  
(The West's best Durocs)

## BALLAMOAR FARMS

JERSEYS

Richmond, Utah.

BERKSHIRES



The blood of champion breeds on

Rivals Premeirs Master 139600, the greatest boar in Utah is at the head of this herd of prize winning Berkshires.

Ames Rival 24th 153236, a champion and sire of champions is another herd boar.

Young pigs for sale at reasonable prices. Pairs not related can be furnished.

**CAINE LIVE STOCK CO.**

Richmond

Utah

## 20 ACRES

farm in sugar beets, close to beet dump, good improvements, the best of soil, water and climate, nearly ideal and the price for this home is \$3500.00. Terms reasonable.

If you want one of the very best 60 acre farms in the valley, with improvements to correspond, a perfect dream, just the one you want, price is right. For prices and terms on variously sized farms in the Great Bear River Valley you must call or write to the

**Bear River Valley Real Estate  
and Insurance Agency**

Tremonton

Utah

## FOR SALE

Utah Big Type Poland China Hogs. Fall and Spring Boars, a few gilts. Best blood and breeding, real big type. Write or come and see them.

H. G. JOHNSON

East Garland

Utah

## WEEDS

Weeds grow on both good and poor land. It is unnecessary to prepare seed-beds for them, or even to plant and cultivate them. They grow with spontaniety, vigor, and prolificacy entirely unparalleled by the desired crops of agriculture, and while we are slaying them by the million in our fields and gardens, they are, in effect, running nurseries of their own in unnoticed fence corners or on unoccupied, non-agricultural land. From these spots weed seed are carried in numerous ways provided by Nature to the very fields wherefrom we had exterminated their kind. This process is apt to continue indefinitely—that is, weeds will always be with us. Weed legislation is by no means futile, however, but it must be confessed that Nature is wholly profligate in her support of weed laws. So, at times, is the public.

## A PERSISTENT FLATTERER

Mother—Why don't you yawn when he stays too long? He'll take the hint and go.

Daughter—I did, and he told me what beautiful teeth I had.—Farm and Fireside.

When you answer the advertise ments in this paper tell them you saw it in the Utah Farmer. Always buy advertised goods.





Five-Passenger Touring Car, a beautiful example of the full stream line yacht type.

## Built for Service

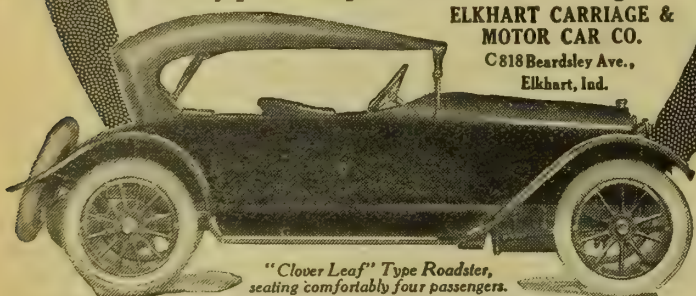
Each ELCAR is built for a long life of satisfactory service—built to outlast other cars in its price class, and by a concern which for 43 years has manufactured only quality products. In beauty of design and finish, in mechanical excellence and proven performance, it rivals cars selling at \$1000 and more. Dollar for dollar we believe it represents the best value on the market today.

# ELCAR \$795

If you know automobiles, a glance at these specifications will tell the story of ELCAR extra measure of value.

Silent, powerful, long stroke motor (3½x5)—unit power plant, 3-point suspension—114-in. wheel base—full floating rear axle—Dyneto double unit starting and lighting system—Delco ignition—unsurpassed body designs—roomy seating for every passenger—full Turkish style upholstery—every equipment that goes to make a car at any price complete. Write for catalogue.

ELKHART CARRIAGE &  
MOTOR CAR CO.  
C818 Beardsley Ave.,  
Elkhart, Ind.



"Clover Leaf" Type Roadster, seating comfortably four passengers.



## MEALS ARE NEVER LATE

When you come home from a call with only a few minutes in which to cook supper—then the handy NEW PERFECTION OIL COOK STOVE helps you to hurry.

It lights at the touch of a match, and cooks as rapidly as a gas stove. To more than 2,000,000 housewives the NEW PERFECTION means "gas stove comfort with kerosene oil."

**NEW PERFECTION OIL COOK STOVES**

Made in 1, 2, 3 and 4 burner sizes. See the new 2 and 4 burner stoves with fireless cooking oven.

**THE CONTINENTAL OIL COMPANY**  
(Incorporated in Colorado)

Denver Butte Pueblo Boise Albuquerque Salt Lake City Cheyenne

## FOR A SHORT TIME ONLY---

A HANDSOME and HIGHLY PERFECTED PLAYER-PIANO  
THE FINEST EVER OFFERED AT OR NEAR THE PRICE. THE

# AEOLIAN PLAYER-PIANO

With Beautiful Music Cabinet and 30 Rolls of Music.

**DELIVERED TO YOU FOR \$10**  
**A FIRST PAYMENT OF \$10**

Balance in easy monthly payments. Price of Outfit \$460.

The Aeolian Player-Piano is entirely above the class of other player instruments advertised at low prices.

For price is not the first consideration in this instrument. It is the highly perfected and finished product of the largest manufacturers of musical instruments in the world—the concern known everywhere as the leader in fine player construction—The Aeolian Company. So quality is the first requirement in the Aeolian Player—quality worthy of the unqualified Aeolian guarantee.

Its wonderful pneumatic system, because of many patented and exclusive features, is unequalled in responsiveness, musical capability and ease of operation. A remarkable perfection is evident in every part that is a factor in securing musical excellence—for this Aeolian Player-Piano, remember, is the work of the men who have made all of the world's finest players.

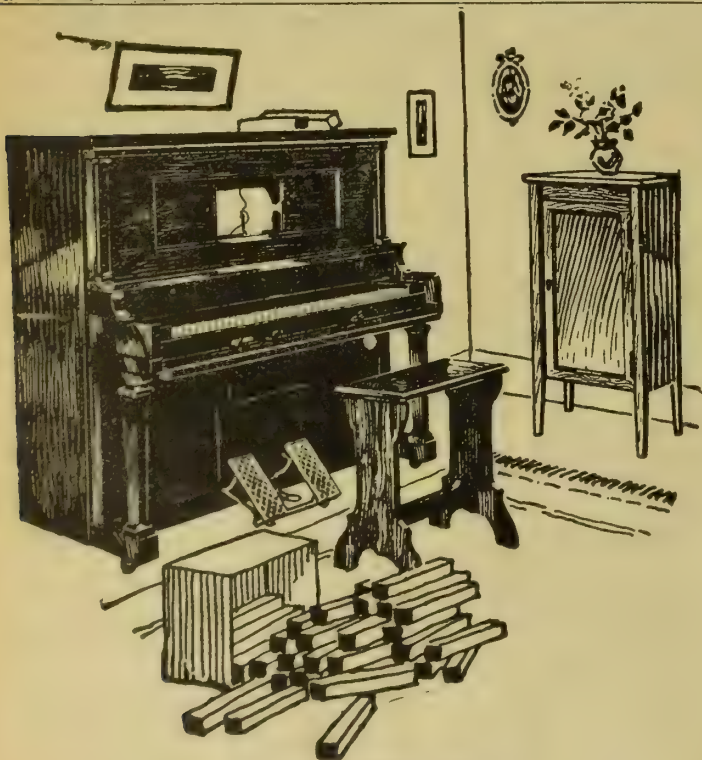
The piano quality of the Aeolian Player is also very superior. The tone is rich, smooth and big in volume. The action is quick and well-balanced—delightfully satisfactory to the person who plays by hand. The tone experts who have made the famous Weber and Steck Pianos such magnificent instruments, have given their best skill to the Aeolian Player-Piano also, and have helped to make it one of the greatest triumphs of the Aeolian Organization.

The Aeolian Player-Piano is truly a quality musical instrument. It is sold at a moderate price only because science and efficiency and expert skill in Aeolian manufacturing secure economics that make low prices possible.

New upright Pianos from \$180 up—Good used uprights at \$60-\$85-\$140 and up. Easy terms. Write today.

**Consolidated Music Co.**  
ESTABLISHED 1862

ROYAL W. DAYNES, Manager  
13-19 E. FIRST SOUTH ST.  
First of all Reliability—our Fifty Fourth Year.



Send in This Coupon

Consolidated Music Co.  
Salt Lake, Utah.

Gentlemen:—

Send free—catalogues and information regarding your special offer on Aeolian Player-Pianos.

Name .....

Address .....

Mention the Utah Farmer, when writing.



600.5 ag. sec.  
UT

COLLEGE OF AGRICULTURE  
READING ROOM

# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region

OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE

VOLUME XII; No. 47

LEHI AND SALT LAKE CITY, UTAH

JUNE 24, 1916

## ONE OF OUR COUNTRY SCHOOL HOUSES.

We have some of the best schools  
to be found anywhere.

The greater part of our taxes  
are used for educational purposes.



## THE HOME AND ITS SURROUNDINGS.

Here is a farm home. See what a  
difference a few trees and shrubs  
make to a place.

They will increase the value of  
your place and help to make it so  
much more attractive.



## Handling the By-Products of the Fruit Business

Address before the Farmers' Round-Up by Leon. D. Batchelor, University of California, Citrus Experiment Station, Riverside, California.

(Continued from June 10th)

Even with low grade fruit which reaches the packing house taken care of, there are still many tons remaining on the ground in the average orchard which should be utilized as stock feed, and here lies the most practical disposition of most of the real waste fruit of the orchard; unless denatured alcohol enterprises are established to consume such fruit at prices paying something more than cost of handling.

In considering the value of the several fruits compared to grain and hay as stock feed, the following table prepared by Professor Jaffa (California Fruits, p. 603) of the University of California, is interesting.

the feeding value of corn silage. Lindsey of the Massachusetts (Hatch) Station concluded that 4 lbs. of apple pomace equals 1 lb. of good hay for cows. From 155 to 30 lbs. of pomace may be fed daily to cows with advantage."

Many fruit growers are producing hogs in the orchard with little or no grain up to the fattening period. This is especially practical in the irrigated regions where a portion of the orchard can be kept in alfalfa sod. By rotation of the alfalfa portion of the orchard sufficient hog feed can be produced to balance the fruit ration and not lower the production of the orchard. There is in fact a decided

100 pounds fruit equivalent to pounds of

	Wheat straw	Alfalfa hay	Oat hay	Corn	Barley	Oats	Wheat	Wheat bran	Wheat middlings	Rice bran	Cottonseed meal	Cocanut cake meal
<b>Fresh Fruits</b>												
Apples	34	20	24	15	15	17	16	18	16	13	9	13
Oranges	33	19	23	14	14	16	15	17	15	12	8	12
Pears	40	23	30	17	18	20	19	20	19	15	11	15
Plums	50	30	36	22	24	25	24	26	24	20	14	20
Prunes	46	27	33	20	22	23	22	24	22	18	13	18
Apricots	40	23	29	17	18	20	19	20	19	15	11	15
Nectarines	43	26	30	19	20	22	21	23	21	17	12	17
Figs	50	30	37	23	24	26	25	27	25	20	14	20
Grapes	50	30	37	23	24	26	25	27	25	20	14	20
Watermelons	22	13	16	10	10	11	11	12	11	8	6	8
Nutmeg melons	19	11	13	8	9	9	9	10	9	7	5	7
<b>Dried Fruits</b>												
Dried prunes	175	104	125	78	82	88	84	92	84	67	48	68
Dried apricots	194	115	138	86	90	97	93	102	93	74	53	76
Dried peaches	190	113	135	85	88	95	91	100	91	72	51	74
Dried figs	186	110	132	83	85	93	89	97	89	71	50	72
Raisins	216	128	153	97	100	108	103	111	103	82	59	84

Of course these valuations must be accorded some latitude as they are based on averages. Certain varieties of the sweet and ripe apples may contain more nutrition than the more acid or immature fruit, and similar variations will be met with in considering the hays and grain, likewise the comparisons are not based on exact equivalents of carbohydrates, proteins, etc., but the table nevertheless serves as a useful guide in pointing out the value of certain fruits as food for farm animals. Their value may be further diminished or increased depending on the materials fed with the fruit.

The following experiences cited from Henry's (Eleventh Edition, p. 195) "Feeds and Feeding" throws additional light on the value of apples as a stock feed.

"Withycombe of the Oregon Station fed 3 shoates all the apples they would eat, 897 lbs. of apples producing 38 pounds of gain in 14 days. During the second period of 15 days, 1,119 lbs. of apples gave only 3 lbs. of gain. In another trial lasting 79 days 3 sows showed a gain of 36 lbs., or 1 lb. of increase for each 64 lbs. of apples fed. Clark of the Utah Station found that 'Apple fed to pigs in 2 experiments with skim milk' and shorts had a value ranging from nothing to 18 cents per cwt. In one trial apples were only equal to grass pasture."

"From trials with dairy cows at the Vermont Station, Hills concludes that apples have about 40 per cent of

leaning toward cover crops and periods of sod rotation in many of the orchard sections of the west, regardless of the hog and by-product question. With the present price of pork, the animal industry department will agree that the hog may be made a very profitable by-product in the orchard. It might be wise to turn attention to this form of disposal or cull fruit before establishing vinegar factories which must compete with the manufacture of grain vinegar, which we are told constitutes about 80 per cent of the average total annual output of the United States. Comparing these two types of vinegar Mr. B. F. Butler, ("Better Fruit" p. 14, Sept., 1914) Chief Chemist of the Golden Gate Compressed Yeast Company and Potrero Vinegar Works, San Francisco, writes as follows:

"The practice of utilizing waste fruits for vinegar making is a travesty on the intent and purpose of the pure food laws. There is utter disregard of any normal or statutory laws of sanitation governing the materials employed for cider vinegar. Foul, rotten and wormy fruit being used, and not cleaned or washed before pressing cider from it. Contrast with this the selection of grain for distilled vinegar and the due regard to sanitation evidenced by the care exercised in cleaning and washing the grain preparatory to processing. The conclusion must follow that some legislative action should be taken at once to prohibit the use of filthy waste fruits (Continued on page 7)

## To Play Piano Well

One should have the benefit of the best rudimentary instruction in the beginning. This can only be done by selecting the most competent instructor.

### Prof. J. J. McClellan's Piano Course

Written by this eminent instructor and performer for the particular instruction of those who cannot come to him in person—gives you the benefit of his teaching in a way that enables you to become proficient in a short time.

### This Is The Course---

we are offering to all our students of piano. It has been very successful and is well liked by all who are studying it.

WE ALSO HAVE COURSES IN VIOLIN, VOICE, ORGAN, DRAMATIC ART and BAND INSTRUCTION.

All of these courses are compiled by the best talent that can be secured and are written in that understandable form that allows you to grasp the instruction easily.

#### SEND IN THE COUPON—TODAY

and see how simple it is to study your chosen subject with the instruction coming from the best talent in this part of the country. You will be under no obligation to us and we will be very glad to explain.

## Utah Conservatory of Music

Templeton Building

Salt Lake City, Utah

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UTAH CONSERVATORY OF MUSIC

Templeton Building, Salt Lake City, Utah.

Gentlemen.—Send free—information regarding the course checked. It is understood that I am not obligating myself in any way.

Name.....

Address.....

City..... State.....

Piano Organ Voice Violin Band Instruction Dramatic Art



Growing Certified Potato Seed

The Business Man's Chance

E. P. Taylor Field Horticulturist.

Up in Idaho the natural conditions surrounding potato growing are ideal. The soil in the principal potato districts of the state is a loose volcanic ash or a sandy loam and seems with average handling to be loose enough to allow the forming tubers to develop normally in all directions, resulting in potatoes smooth and free from objectionable knots and irregularities. The tubers produced are usually white and mealy and of excellent quality.

The climate of the state also seems well adapted to potato growing. The seasons in sections are reasonably cool but long enough to allow the crop to mature. Coupling the ideal soil conditions with a congenial climate and adding to these an ample supply of irrigation water and good drainage and it is apparent that the potato industry in Idaho has a firm foundation.

But it requires more than good soil and climate and water to grow good potatoes from year to year in any locality. It takes thought and care. It has been found that potatoes grown upon the same soil continuously, develop disease and that without careful selection of seed, the type is liable to degenerate and the yield fall away.

These are lessons that Idaho potato growers learned to a certain extent by studying the experience of potato growers in other large potato producing states. Their own yields started downward dropping from 10,000 to 12,000 cars per year to 7000 to 8000 cars.

Federal potato experts warned them of the dangers surrounding disease, poor rotations, and methods, and state agricultural authorities quickly united in the campaign for better potatoes. Be it said to the credit of an alert class of growers in Idaho definite plans for potato improvement are now well under way.

One of the movements started by the Agricultural Extension Department of the University of Idaho has been the adoption of a plan leading to potato seed certification. Such a plan has already been tried in Wisconsin and is working well. Idaho is the first state in the west or northwest to put into effect such a plan, but this season about ninety separate growers have started into this work in a most thoro way establishing potato seed plats upon the cleanest, richest, most disease-free soil upon their places where soil, irrigation and drainage are the best possible. Upon these seed plots of from one to three acres each, only seed potatoes of perfect type and shape have been planted. This seed was selected as free as possible from all diseases including scab, Rhizoctonia and Fusarium wilt—these being the most prevalent potato diseases of the irrigated west. Every seed tuber was cut across the stem end for the detection of any interval vascular infection in order that these could be rejected. As a final precaution this especially selected seed was dipped with corrosive sublimate solution from 1½ to 2 hours. Four ounces of

E. F. Burton, U. S. Dairy Demonstrator—Wyoming.

Who is your best customer? What business is your good customer engaged in? What percentage of your neighborhood population are really good safe men to deal with? Who are sure to pay? Can you help to increase this percentage?

It is surprising how few business men analyze their business along the lines suggested by these questions.

standard in grade. Acting on the assumption that a credit business would help hold his customers, he indulged in a credit system, but the cash went to Chicago and the "credit" to the local merchants.

Surveys showed that there were two things which were fundamental causes of the condition. First, the farmers were not prosperous, and did not have the money to pay for things they needed; and, second, the retail price of goods was far too much above the original cost of production.

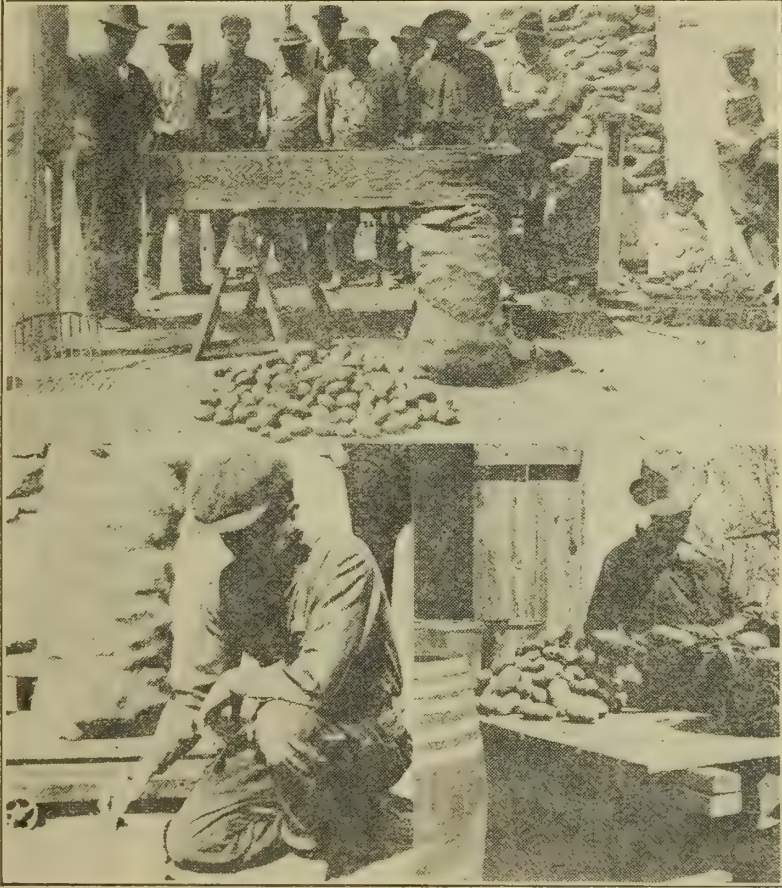
What is the solution of this serious problem? I can but give you the solution as the business men of this community saw it.

The first thing to do was to make a campaign for dairying. Bull clubs were organized, good dairy cows were brought in, the bankers made longer time loans at lower interest rates—6 per cent in many cases if the money was to be used in buying dairy stock; and some of the commercial clubs appointed assistant secretaries whose duty it was to assist in this work. It was not long before the bonds of friendship and a sense of reciprocation caused the farmers to support and buy of their friends, the local business men, and the business men in town stood by the farmer.


You ask why did dairying appeal to these business men as the thing to boost among the farmers?

The figures from the surveys made showed that the average farmer was earning less than \$400 per year for his labor, while those engaged in diversified farming with dairying as a basis, were making from \$2000 to \$8000 profit on small farms of less than 200 acres. Conditions were studied in dairy centers and it was found that as a rule dairymen had bank accounts. Many convincing cases were found. One only need be cited here: In this dairy county the first bank was established 22 years ago. Grain farming was being practised largely at that time. The farmers were very unprosperous so dairying was encouraged by the banker and other business men who became interested. In the last 18 years the banks have increased from one to fifteen in number and the deposits have jumped from almost nothing to over \$7,000,000 on January 1st, 1916. What more could be done for the permanent prosperity of everybody in the community?

It was discovered through the surveys that it was not enough to just milk cows, but if a man was to succeed in the milking business he must do at least four things: First, pure-bred bulls must be used; second, pro-



Potato Dipping Demonstration by County agent Birch preparing the corrosive sublimate for potato dipping demonstration.



Cutting the stem end of each potato for disease before allowing it a place in a state potato seed place for certification.

Of course, some will ask, "Why should I go to all this trouble? My only answer is, "Is your bank account all you would like it to be? Is it all it should be? I am not talking to you if you can answer these questions in the affirmative. I am addressing this article to the man who told me he had \$28,000.00 in outstanding accounts and only 40 cents in the bank, and his associates who are in a similar situation. What was wrong? Mail order competition had forced this man to sell his goods cheaper. He could not reduce his margins so he bought cheaper goods, below

(Continued on page 11)

(Continued on page 13)



## DAIRYING

### PROPER CARE PREVENTS DANGER TO COW OR CALF Dr. F. S. Schoenleber.

A few simple rules observed before and after birth will eliminate danger either to the cow or her offspring.

"The feeding of some concentrates—cottonseed meal, linseed meal, or bran—a few weeks before the cow is due to freshen is helpful both to the mother and her offspring. Dry feeding probably has clogged the eliminative organs—the bowels, the skin, and the kidneys. To a great extent these concentrated feeds will correct this condition. Cottonseed meal should not be given to those cows that are exceptionally heavy milkers because it increases the flow of milk and might cause milk fever. It is a good plan to give the heavy milkers a medium to small dose of epsom salts—8 to 12 ounces dissolved in water—two to three days apart just before the cow is expected to freshen. This will help keep down the congestion."

During the gestation period a cow is feeding herself and another individual. She therefore needs a large amount of the best available food and water. Moldy feed, contaminated water, and unsanitary surroundings tend towards a weak calf and cow. Often this is the starting point of contagious abortion.

Exposure to cold, rains, and strong winds have the effect of driving the blood of the animal from the surface to the internal organs, which frequently result in diseases of various kinds.

The cow should be isolated a few days before the calf is expected. This will prevent any possible injury or worry either to her or to her offspring. She should also be kept out of reach of hogs. At this period cows become cross and they should be handled carefully in order to prevent danger to strangers or owners.

If a cow does not clean properly within 10 to 12 hours, artificial means should be taken immediately because the prolongation of this condition is likely to injure the delicate organs and impair her as a breeding animal. If the membrane does not come with the calf or soon afterwards, the cow should be given at least one pound of epsom salts dissolved in lukewarm water. This is for a cow weighing 900 pounds. The dose must be increased according to the weight of the cow above 9.0 pounds.

Immediately after parturition a cow does not need heavy feeding. At this period she is feverish and her appetite is poor. She will, however, eat food when put before her despite the fact that her digestive system has no use for it. This feeding will help to create more fever. Plenty of cool water should be given her, and after 10 to 15 hours feeding is in order. Feed should be gradually increased as the cow gains in strength.

Calves should be protected from the weather and unsanitary surroundings. The cow should be milked four to 10 hours after calving. This will allow the calf plenty of the first milk. Subsequently the cow should be milked regularly. When her feverish condition has left her after the third day, the milk is fit for human consumption.

Grass is the natural food for the cow. She does better on it than on any other feed. Whenever grass is not available ensilage should supplement it. A cow will respond readily, both in milk and in health, when she is fed on a variety of feeds.

### CHEESE FACTORY OR CREAMERY, WHICH? By G. L. Martin, Bozeman.

The starting and operating of a cheese factory has several advantages over a creamery. It costs much less to build and equip a cheese factory. The building need not be so large nor costly and the equipment is far less expensive. A five horse power vertical boiler, a 500 gallon cheese vat and gang press are the most expensive pieces of equipment and need not cost much over \$200. The entire equipment for a factory that will handle the product of 500 cows can be had for less than \$600, and the total cost of a factory should not exceed \$1,500. In factory building a creamery, the equipment alone will cost at least \$1,500 as there is far more machinery required for the refining of cream, the churning and storage of butter.

**Fewer Cows**  
A cheese factory can be operated successfully on the product of from 100 to 200 cows where it will require the cream from at least 400 cows to operate a creamery. For this reason a cheese factory can be built and operated successfully in many communities where a creamery would fail from lack of cream. The factory at Salesville, Mont., operated last year on about 2,500 pounds of milk per day—the product of about 125 cows.

**Higher Prices for Butter Fat**  
Another advantage for the cheese factory is the higher prices paid the farmers for butter fat during the summer months when creameries are obliged to pay the summer prices. The following is the relative price per pound of butter fat a creamery would have to pay to equal the price received at a cheese factory based on 4 per cent milk.

Cheese Factory	Creamery
\$1.00 per hundred.....	25.00c lb. B. F.
1.05 per hundred.....	26.25c lb. B. F.
1.10 per hundred.....	27.50 lb. B. F.
1.15 per hundred.....	28.75c lb. B. F.
1.20 per hundred.....	30.00c lb. B. F.
1.25 per hundred.....	31.25c lb. B. F.
1.30 per hundred.....	32.50c lb. B. F.
1.35 per hundred.....	33.25c lb. B. F.
1.40 per hundred.....	35.00c lb. B. F.
1.45 per hundred.....	36.25c lb. B. F.

1.50 per hundred.....	37.50c lb. B. F.
1.55 per hundred.....	38.75c lb. B. F.
1.60 per hundred.....	40.00c lb. B. F.

#### Home Markets

The home market for cheese is a big item. A very small per cent of the cheese consumed now is manufactured here in the state. For this reason there is a splendid home market for all the cheese that can be made. The fact that the quality of our home product is superior of any that comes in from the outside gives the home factories a decided advantage on a competitive market and enables the factory to pay the farmer well for his milk.

### Questionous and Answers

Eenterprise, Utah.

Utah Farmer:

Dear Sir:—I have two cows that seemed to be stiff in their joints. They took this about a week ago. They don't act sick. They eat and drink good but have fallen off about ¾ on their milk. They can hardly get up when they lay down and one cow's eyes seemed swollen of a morning and also run. Please let me know what ails them and what to do for the cows, through your next issue of the Utah Farmer? A Subscriber.

**Answered by Dr. H. J. Frederick.**  
From your description it is very difficult for me to make a diagnosis. It is possible that your cows may be affected with pink eye, a constitutional trouble that very often manifests itself in the eyes much as you describe. However, the entire body would be affected also. They would show considerable stiffness. If this is the case it would be well to keep them in for a number of days; while their eyes are affected they should be kept in a darkened stable and given plenty of laxative food and good clean water. It might be well to give the animals affected about one-half pound of epsom salts and about two drams of potassium iodide daily for two or three days. If the eye troubles become severe they should be washed in a solution of boric acid. If this is not the trouble affecting them it would be well to call in a competent veterinarian to advise you.

Rigby, Idaho.

Utah Farmer:

Will you please tell me what is the matter with my mare and what I can do for her?

One of her front ankles is larger than it should be, and is very stiff, but it does not appear to be sore and she is not lame. A Subscriber.

**Answered by Dr. H. J. Frederick.**  
Where an animal's ankles are enlarged, as you describe, and where considerable stiffness is shown, a good blister, consisting of red iodide of mercury and cantharides in equal parts with a eight parts of vaseline, should be rubbed into the enlargement. This should be thoroughly rubbed in so that it will cause blisters to form. This is allowed to remain on about twenty-four to thirty-six hours—depending upon the severity of the case. Then wash off with soap and water and apply vaseline or oil. This may be repeated as soon as the inflammation has subsided, if necessary. This should help in overcoming the trouble after two or three applications. If not, it would be well to call in a competent veterinarian to help you in this matter.

### If you want money, drop us a line.

We loan on first mortgages on Utah farms or Salt Lake City real estate at reasonable rates.

Prompt action and fair treatment if you do business with us.

### Palmer Bond & Mortgage Co.

WALKER BANK BUILDING  
SALT LAKE CITY

### Ranch Bargain

800 acre ranch, well improved, all machinery, etc., puts up 450 tons hay and crop can be increased, free range for 1,000 head or more. Will take good farm as part payment.

FEDERAL LAND CO.

Ogden

Utah

### Two Farms For Sale

Situated about 1½ miles east of Springville.

1st. Ostler Farm. Twenty-six and one-fourth acres all under good fence, orchard and farm land. Five room brick house, brick granary and cement cellar. A good spring and flood water right from Hobbie Creek.

2nd. Konold Farm. 93.9 acres—about 50 acres under cultivation balance pasture. About 9 acres orchard, 10 room frame house large barn, stable, sheds, chicken house, pig pen and some farm implements. Water piped in house and corral. Farm has flood water right from Hobbie Creek.

These farms are now leased until December 31, 1916.

Sealed bids will be received until 5 P. M. July 14, 1916.

All bids must be accompanied by certified check of 10 per cent of bid balance to be paid on or before January 15, 1917. Checks will be returned with all rejected bids.

The City Council reserves the right to reject any or all bids.

For further particulars inquire of J. L. WHITING, City Recorder  
Springville Utah

### STARS MAKE DOLLARS

If you're a man of energy and business ability, here's an opening worth consideration. There is a great demand for drilled water wells, and there's large sure profits to the man with a

#### STAR DRILLING MACHINE

Portable—Steam or Gasoline  
Best by test. Low in price, high in practical worth. You can make it pay for itself and earn dividends all the time. Look into this! Sold

on payment plan if desired.  
Our 110-page catalogue describes 21 different Star Outfits. Write us and we'll mail you this book which will point the way to money making. Write to-day.

Star Drilling Machine Co.  
542 Washington St.,  
Akron, O.

When you answer the advertisements in this paper tell them you saw it in the Utah Farmer. Always buy advertised goods.

Uncle Sam will carry  
your money in the  
mails to and from  
this old bank.

4 per cent paid on savings

Walker Brothers  
Bankers

Founded 1859

Resources over \$6,500,000.

SALT LAKE CITY





Mr. Horace Tuttle,  
Springdale, Washington County, Utah  
Dear Sir:—In reply to your card of recent date let me say that corn fodder will cure as silage in a hole in the ground providing the hole is smooth and deep enough, and the silage cut properly and tramped thoroughly in the hole. These precautions are not absolutely necessary, but without them a considerable waste is experienced in the curing process. The hole should be at least 15 to 20 feet deep besides as smooth as possible; being rocked up will do providing the mason work is very smooth. Brick can also be used, and is much better than the ground alone because of the loss which may be incurred without this precaution.

Precautions should be taken after the corn is put in because during the curing process the poisonous gas (carbon dioxide) is produced, and deaths have occurred in removing corn from these silos due to the gas. Complete ventilation should be provided, and great care be used.

If we can help you further kindly let us know.

NO REWARD FOR BIRD EGGS.  
Logan, Utah.

Utah Farmer:  
My Dear Sir:—From time to time articles are published in various papers and magazines in the United States asserting that rewards are offered for the eggs or nests of various birds. Almost always this information is erroneous, but before the truth is found out a number of people have destroyed or disturbed the nests of many of our bird friends, in an endeavor to collect the reward they believe to be offered. I am just in receipt of a letter which states that the writer has found the nest and eggs of the bluejay and inquires if the reward that was offered in the fall in one of our local papers is still in effect. He wants an immediate reply in order to secure the eggs before the young birds hatch. The enclosed letter from Mr. Henshaw, Chief of the Biological Survey, should be valuable in correcting the impression that rewards are offered for the nests of this or any bird. I may further state that I know of no case at the present time where the Government has ever offered a reward for the nest or eggs of any bird, and only in one or two cases—the Passenger Pigeon, for example—has a reward been offered by a private individual or by ornithological associations. I know of no reward at present offered for any bird in this country.

Very truly yours,  
Harold R. Hagan,  
Assistant Entomologist.

Mr. Harold R. Hagan,  
Utah Agricultural College,  
Logan, Utah.  
Dear Sir:—I am in receipt of your

any other species. I know of no authorization for the offering of such a reward.

Very truly yours,  
(Signed) H. W. Henshaw,  
Chief, Biological Survey.

SUDAN GRASS  
Rupert L. Stewart.

Sudan grass was first introduced into the United States in 1908, and since that time it has been quite widely scattered throughout the country. It has a wide range of of adaptation, doing quite well under humid conditions even as far north as latitude 49 and standing the droughts of the semi-arid sections as well, if not better than any other cultivated crop.

Only within the last two or three years, however, has Sudan grass been cultivated primarily for hay. Previous to this it was grown almost entirely for seed, due to the large demand for seed and the resulting high prices. However the supply has exceeded the demand, the inevitable drop in price has followed, and this in turn has stimulated to some extent the production of Sudan grass hay.

The discovery of this new grass came about as the result of a search for forms of wild andropogons which do not have rootstocks. In other words they sought to find a grass having all the desirable qualities of Johnson grass and yet free from the one objectionable feature, viz., that of producing rootstocks. Sudan grass is very closely related to the cultivated sorghums and hybridizes with them readily. Under cultivation in the United States this grass has shown itself to be distinctly an annual, being easily killed by frost.

It seems quite improbable that Sudan grass will ever replace alfalfa as a hay plant in the irrigated sections of the West, but where dairying is the chief industry of the people it is quite possible that this crop could be grown for mixing with the alfalfa and in this way produce a feed that would suit the needs of the dairyman better than alfalfa alone. Sudan can be made to fit into any rotation; this alone should mean much to the average farmer.

Under irrigation Sudan grass yields better than does alfalfa. In some places yields of over 9 tons per acre have been reported.

Experiments with Sudan grass have been conducted at this Station for the past few years but only in a limited way until last year, when a considerable acreage was seeded to this crop. About six acres of Sudan was grown last year; some of it being planted in rows and some broadcasted. The following table will give some idea of the results obtained from the two methods of seeding.

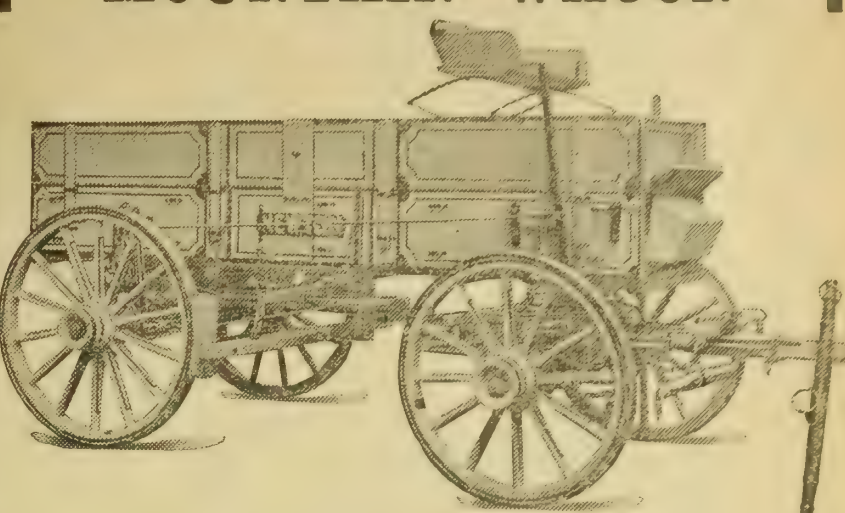
Broadcasting and Planting in Rows Compared.  
Pounds per Acre.      Lbs. Water to Produce 1 lb. Dry Matter.

	1st Cut	2nd Cut	3rd Cut	Total Yield	1st Cut	2nd Cut	3rd Cut	Average
Rows	1892	3591	2935	7425	2612	669	1202	1394
Broadcast	1895	2671	1695	6261	2531	581	1652	1588

letter inclosing a communication from Mr. . . . ., requesting information as to a reward offered by the Government for nests or eggs of the blue jay. The newspaper article referred to is entirely erroneous, as no reward of this sort has ever been offered by the Government, either for the discovery of nests of the blue jay or

The land was all prepared at the same time and in the same way and received practically the same treatment after seeding. The seed was broadcasted with a single disc drill at the rate of 8 pounds per acre and covered about two inches deep, and planted in 32-inch rows about two inches deep at the rate of 2½ pounds

# THE NEWTON MOUNTAIN WAGON



The Newton Mountain Wagon has three leaf spring seat, bow staples, tool box, tire burrs in wheels, clipped roller clear brake, heavy flat truss under axle and hounds on top of reach.

Newton Wagons have been standard since 1854 and are built in many styles for all localities. Write us for further information.

For Sale By  
**MILLER-CAHOON CO.**  
Murray, Utah      Idaho Falls, Idaho

# THE FUN OF KODAKING



The season is starting—for outdoor pictures of the children, and the folks.

What a world of satisfaction when the prints come out perfect. They always do when you use an Eastman Kodak.

We have them at prices to suit any pocketbook and any size you might desire.

A few of the popular numbers:

No. 00 Premo	\$ .75.	Roll of Films 10c
No. 2 Brownie	\$2.00.	Roll of Films 20c
Vest pocket Kodak	\$6.00.	Roll of Films 20c

Write today for catalogue—its free—postpaid.

Many others at prices ranging up to the famous 3A at \$22.50—the one that takes the post card picture.

## SHIELDS STATIONERY CO.

Kodak Headquarters,  
131 Main St., Opposite Kearns Bldg., Salt Lake City.

per acre.

It will be noticed that in almost every case the field planted in rows gave the better yield but the difference is slight except in the second cutting, when the rows yielded 830 pounds per acre more than the field that was broadcasted.

The number of pounds of water that it took to produce one pound of dry matter is quite high; much higher, in fact, than the requirement for corn, wheat or oats; but this does not necessarily mean that it takes that much to produce a crop, as the water was applied at frequent intervals without reference to soil moisture.

The yield of hay is not as high as might be expected but the seed was not planted till the middle of May, which is too late in this section. It should be planted as soon as the danger of heavy frost is passed and in this way three heavy crops can be secured.





Combined with the  
Deseret Farmer and Rocky Mountain Farming  
Established - - - - - 1904

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All mail should be addressed to the Utah Farmer  
Lehi, Utah Kirkham Building.  
Our office at Salt Lake City, Utah,  
is at 417 McIntyre Building.

#### Members of the



New York Office 5th Ave. Bldg.  
S. E. LEITH, Mgr.

Chicago Office Steger Bldg.  
TOM D. COSTELLO, Mgr.

St. Louis Globe-Dem. Bldg.  
C. A. COUR, Mgr.

**Change in Address**—When ordering a change in the address, subscribers should be sure to give their former as well as their present address, otherwise the address cannot be changed. This is a matter of importance to you and to us.

#### OFFICIAL ORGAN

Utah Horticultural Society, Utah State Dairymen's Association, Utah State Bee Keepers' Association, Bear River Valley Farmers' Protective and Commercial Association, Agricultural College Extension Department and Utah State Fair Association, Utah-Idaho Millers' and Grain Dealers' Association, Utah Fruit Growers Association.

#### OUR GUARANTEE

We guarantee every subscriber against loss thru dishonesty or attempted swindle by any advertiser in this publication. We do not attempt, however, to adjust trifling differences between the subscribers and honest responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within thirty days from date of the transaction, and the subscriber must have mentioned Utah Farmer when writing the advertiser.

**Advertising Rates**—The advertising rates will be sent upon application.

The past season has been a late one and there are many reasons why you should hatch some chicks in June. Of course we all agree that the early hatch is better, but why not more chicks on the farm? Why not make the most out of every branch of farming? Keep the chicken free from lice and give them the same attention that the earlier ones had and there is no reason why you will not get good results.

#### OUR SHEEP BUSINESS

The sheep industry in Utah and surrounding states looks very good at the present time. Considerable interest has been taken the past year or two by the sheepmen and many improvements are the results of the good work they have been doing. Better methods in the care of their flocks, more careful and better system in the marketing of their wool, have all helped to increase the profits of the business. It is with the sheep business as with all other branches of live stock, intelligent effort counts. We look forward to the day when a great many sheep will be raised on our smaller farms.

#### LARGE INCREASE OF SILOS

We have known for some time that a great interest was being taken in the building of silos but we were surprised to learn the number of silos that have been built the past 12 months. During the past two years an increase of over 600 per cent in the number of silos, has been made.

Many people thought at one time that we did not need the silo in Utah, because we were able

to produce alfalfa at minimum cost. Now these same people are building silo and recommending others do the same.

The balanced ration and succulent food that ensilage give the farmer for feeding is one of the benefits of the silo.

At the present price of alfalfa one will be able to save the cost of building a silo from the first seasons feeding, at least this is the opinion expressed by some of our farmers who have had some experience with the silo.

If you are going to build a silo this year you must arrange for the corn to fill it, the silo can be built later in the season.

#### A GOOD WAY TO HELP

You should know that without advertising there would be no farm papers. Now the way to help us secure advertising is to patronize those who advertise in our columns. We know you are willing and this is the way you can help.

By writing a postal card to the advertiser and asking for the name of the merchant in your town handling his line.

Or by going to your merchant and telling him you want the goods represented in our advertising columns. Tell him you will not accept any other brand.

Take a copy of The Utah Farmer with the advertisement to your merchant and show him what is offered and that you want him to write the advertiser about their goods.

Do not let up on your merchants until they supply you with the goods we are advertising.

First of all, write the advertiser for full particulars about it. Don't buy any other kind. If the merchant tries to sell some other kind, tell him he is not working in the interest of your farm paper.

#### LAND LOANS

It looks very much like congress would pass at this session the Land Credit Bill. The senate and house have both passed one and it is now in the hands of a conference committee. Both bills are so near alike there should be no trouble in agreeing on one to report back to the house and senate.

We must not however expect any direct benefits for a few months as it will take time to organize and put in operation.

These bills provide for twelve land banks in twelve districts and run under the direction of a federal farm loan board appointed by the President. Through local association the farmers will deal with these banks. Loans will be made on the amortization plan, interest and part of principal, payable at certain periods.

There is need of such banks or associations in the west, for the farmers have been paying too high a rate of interest. Because the government is behind these banks, this system should secure the farmers and patronage confidence. We must not expect to borrow money from these banks unless we have farm land for security and then obtain only a reasonable amount according to the value of the land offered as security.

#### COVER YOUR ALFALFA

Even with the prices that were secured for alfalfa last winter, it will be profitable for the average farmer to build a protecting shed of some kind for his alfalfa. The prospects are that hay will be higher this winter, and this is

a greater reason why alfalfa hay should not be left unprotected from the rains and snows after being put away.

Well cured alfalfa hay is well worth the extra expense involved in building some kind of a protection for it. The hay will command a higher price if sold on the market, likewise, if fed on the farm it will have more nutritive value than if it is exposed to all kinds of weather.

Cheap sheds for storing alfalfa may be constructed from poles placed at the corners and sides, set in the ground and securely fastened so to support a pitched roof of lumber, corrugated iron, or some prepared roofing. The sides need only be walled for a short distance. Such a building can be built for a very small cost. The saving will pay for the building of the shed at the present, and possible future prices of hay.

#### GOOD ROADS

Considerable interest is being taken locally by various organizations and by good roads enthusiasts for the building of better roads. We are learning the value of a good road, not only for the use of the auto, but for the farmer who has to haul his products to market, or to do any travelling at all.

One of the greatest taxes which confronts the taxpayers is the tax for poor roads, and it is about time that we were building better roads; making them more permanent and lasting. The initial cost will be greater, but in the long run, much cheaper, than the makeshift roads that are often built.

It is not so much a question today of building good roads, as we are nearly all converted to this, but the serious problem is the kind of roads, and how to build them at the least cost. With the aid of government and local experts we should not make many serious mistakes, because records have been kept, and tests made of the various kinds of road building material. We need more "better roads" and any movement that will help to bring this about is a step in the right direction.

#### ADVANCE IN ALL MATERIALS

According to some of the best authorities, the average price of all commodities has advanced 31 per cent since the war started. In other words, it takes three dollars now to do the work of two. The advance in price is not confined to any one or two articles, but it seems to be a general thing to hear of advances in any kind of products that the farmer has to buy. Unless some radical changes take place, the prices will be even higher next year.

This advance in price has come home to us, for we find that the price of paper has raised as much as any other product, and furthermore, the manufacturers are not able to produce the same color of paper as they did previously.

Now, the question that we are up against, and it is equally as true to all other buyers, is, are we able to secure in the same proportion, an increased price for the products we have to sell?

Many people do not find it very easy to increase their income one-third. Some people say that the end of the war will adjust many of these conditions, but it seems to us that it is going to take some time even after the war is closed before prices, both to seller and buyer, are going to be adjusted.



**Big Money in Running Water**

Let us start you in a business that will make you from \$15 to \$50 a day when farm work is slack. Other men have done it for years with an

**Improved Powers Combined Well Boring and Drilling Machine**

Same rig bores through any soil at rate of 100 ft. in 10 hours, and drills through rock. One team hauls and operates machine. Engine power if wanted. Easy to operate—no experts needed.

Small investment; easy terms. Make machine pay for itself in a few weeks work.

There is a big demand for wells to water stock and for irrigation. Write for free illustrated circulars showing different styles.

**Lisle Manufacturing Co.**  
Box 978 Clarinda, Iowa

**SELDOM SEE**

a big knee like this, but your horse may have a bunch or bruise on his ankle, hock, stifle, knee or throat.

**ABSORBINE**  
TRADE MARK REG. U.S. PAT. OFF.

will clean it off without laying up the horse. No blister, no hair gone. Concentrated—only a few drops required at an application. \$2 per bottle delivered. Describe your case for special instructions and Book 8 M free. ABSORBINE, JR., the anti-septic liniment for mankind, reduces Painful Swellings, Enlarged Glands, Wens, Bruises, Varicose Veins, allays Pain and inflammation. Price \$1 and \$2 a bottle at druggists or delivered. Made in the U. S. A. by

**W. F. YOUNG, P.D.F., 142 Temple St., Springfield, Mass.**

**GRAIN BIN**  
GUARANTEED FOR 5 YEARS  
BUILT TO LAST A LIFETIME

**A MONEY SAVER in Hauling, Insurance and Waste.**

Fire, Rat and Weatherproof. Will pay for itself. Write for FREE CATALOG explaining how and illustrating full line.

**BUSHNELL TANK WORKS, Inc.**  
Bushnell Dept. I Illinois

Most EASILY ERECTED or MOVED

**To San Diego and San Francisco**

VIA LOS ANGELES and rail or steamer

**\$40.00 TO SAN DIEGO** or SAN FRANCISCO and return

ON SALE DAILY beginning MAY 1st.

Liberal Limits and Stopovers

**BEAUTIFUL SAN DIEGO EXPOSITION**  
OPEN ALL YEAR

**J. H. Manderfield A. G. P. A.**  
10 E., 3rd South St.  
Salt Lake City, Utah.

**SALT LAKE ROUTE**

When you answer the advertisements in this paper tell them you saw it in the Utah Farmer. Always buy advertised goods.

**HANDLING THE BY-PRODUCTS OF THE FRUIT BUSINESS**  
(Continued from page 2)

for vinegar making; which action would automatically tend to gain recognition for the clean, pure, wholesome product—vinegar made from carefully selected, highest quality, clean, sound grain."

The subject of home canning as a utilization of the surplus fruits is not taken up here as space will not permit; this important subject is being duly studied by extension divisions.

Nothing has been said in the foregoing concerning the peach and apricot drying and canning of California, or the prune industry of both Oregon and California; as these commodities are prepared for market primarily as a principal product and not as a by-product. Such industries are making use of the best grades of fruit possible to grow and the mountain states fruit grower should not necessarily consider the California peaches and apricots, or the New York jams and jellies seen in the grocery store as by-products, in the majority of cases, for the fruit was far from being cull fruit but rather was very probably the equal of the best grades of fresh fruit grown in the country and produced especially for preserving.

If this importation of manufactured fruit products is to be diminished by home-production, equally as good grades of preserved fruits must be put up, and a constant supply of such. Much of the success of establishing a brand of canned or dried fruit depends on its continued appearance on the market. This cannot be kept up unless the factory can be assured of suitable fruit far in advance of the preserving season; this can hardly be accomplished if the growers are gambling on the fresh fruit market with intentions of turning to the factory at the last minute if market conditions are unfavorable. The fruit preserving industry where it is carried on most successfully is not a catch-all for unsalable fruit, a place where culls are converted by some magic power into first class products; it is not a means of saving bad fruit, but rather a means by which good fruit is prevented from becoming bad. These facts should in no wise discourage the fruit grower of the mountain states in the establishment of fruit preservation factories. After a thorough trial of selling the fresh fruit, especially the stone fruits, to the general markets it may be proven that the sale of such fruit as a processed article would have been more profitable. If such condition should prevail it seems reasonable, however from the experience of other regions that the chances of success of such factories may be greatly increased as the product of the industry becomes more of a principle product and less of a by-product.

The prices paid to the growers in one of the typical fruit canning sec-

**GRAND OPENING UTAH STATE CAPITOL BUILDING SALT LAKE CITY JUNE 28TH.**

Excursion tickets will be sold from all Utah stations on Salt Lake Route as follows: West of Payson and Garfield including Tintic District June 27th. Payson and East June 28th. Return limit on all tickets July 2nd.

tions of California may be of interest. The Hemet canning factory of Riverside County kindly supplied the following figures:

Price of Peaches and Apricots at the Factory.

	Peaches	Apricots
	Freestone	Cling
1910	\$18	\$22
1911	20	26
1912	20	25
1913	20	25
1914	20	25
1915	9	10
Average	17.83	22.16

The principle varieties used were: Peaches: Freestone, Lovel, Salway, Cling, Tuscan, Phillips, Lemon.

Apricots: Royal.

However, the problem of meeting the competition of New York and California preserved fruits is a much larger question than the utilization of the lower grades of fruit as by-products of orcharding.

**THE PRODUCTIVE LIFE**

Thomas Nixon Carver.

The fellowship of the productive life offers to young men days of toil and nights of study. It offers frugal fare and plain clothes. It offers lean bodies, hard muscles, horny hands, or furrowed brows. It offers wholesome recreation to the extent necessary to maintain the highest efficiency. It offers the burdens of bringing up large families and training them in the productive life. It offers the obligation of using all wealth as tools and not as a means of self-gratification. It does not offer the insult of a life of ease, or esthetic enjoyment, of graceful consumption, or emotional ecstasy. It offers, instead, the joy of productive achievement, of participating in the building of the Kingdom of God.

To young women it also offers toil, study, frugal fare and plain clothes, such as befit those who are honored with a great and difficult task. It offers also the pains, the burdens and responsibilities of motherhood. It offers also the obligation of perpetuating in succeeding generations the principles of the productive life made manifest in themselves. It does not offer the insult of a life of pride and vanity. It offers the joy of achievement, of self-expression, not alone in dead marble and canvas, but also in the plastic lives of children to be shaped and molded into those ideal forms of mind and heart which their dreams have pictured. In these ways it offers to them also the joy of participating in the building of the Kingdom of God.

After the clock struck eleven the peevish father strode to the top of the stairs called down: "Mabel, doesn't that young man know how to say 'good-night'?"

"Does he?" echoed Mabel from the darkened hall be'ow. "Well, I should say he does."

A friend had given Pat a "parrot" which in reality was a baby owl. Several days after, Mike happened by.

"Is the parrot spakin' yit?" asked Mike.

"Niver a word," answered Pat. "But th' little devil is doin' a lot of thinkin,' he is."

**UINTAH BASIN FARM LANDS** priced to sell.

Choice 80 acre farm, 50 acres in alfalfa, good dwelling, full water right, price only \$2500 for the place. Write

**B. L. DART**  
Myton Utah

**GREEN CONCRETE MIXERS**

No matter how small the job all concrete should be thoroughly mixed. The old method of shoveling is tiresome from a physical standpoint and is very unsatisfactory for consistent mixing.

Our foot, steam or gasoline power mixers will solve the problem for you.

Made in several sizes and endorsed by all who have used them. Made in Utah.

Write today for information and bulletins.

**GREEN MACHINERY and MFG. CO.**  
American Building 338 So., Main St.  
First Building north of Post-Office  
Salt Lake City, Utah.

**Lumber at Wholesale**

We can save you from 25 to 40 per cent on lumber, lath, shingles, mouldings, sash and doors.

Let us figure with you on that new house and barn. We ship direct from the mill saving you the middlemans profit.

If you wish to save money and want quality lumber try us.

**Apex Lumber & Shingle Co.**  
227 and 228 Abington Bldg.  
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**WE MAKE**

Farm and Ranch Loans in Utah, Idaho, Wyoming, Oregon and Colorado.

**MILLER & VIELE**  
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**Kill All Flies!** They Spread Disease

Placed anywhere, **Daisy Fly Killer** attracts and kills all flies. Neat, clean, ornamental, convenient, and cheap.

Liberal return. Made of metal, can't get out of place, will not rust or injure anything. Guaranteed effective. Ask for

**Daisy Fly Killer**  
Sold by dealers, or sent by express, prepaid, \$2.00.

**HAROLD SOMERS, 150 DeKalb Ave., Brooklyn, N. Y.**

**EAR PERFECT TAGS**

Samples Free

**ATTACHED INSTANTANEOUSLY**  
Name and Address. Numbered if Desired.  
LEG BANDS for Poultry, Pigeons, Turkeys  
**SALT LAKE STAMP CO.** Salt Lake, Utah.



## The Great Southern Utah Dry-Farm District Kanarra, Cedar and Parowan Valleys, Iron County

By J. W. Paxman, Extension Specialist in Dry-Farming, For the Utah Agricultural College.

### Area

This is a stretch of country comprising three important, open fertile valleys in the east of Iron County running the entire length of the county in Northeasterly direction from Old Ft. Harmony on the south to a distance of about 45 miles on the Beaver County line, ranging from 2 to 10 miles wide.

The acreage approximates 56,000 acres for the Kanarra and Cedar valleys, sometimes called the Rush Lake Valley, and 42,000 acres in the Parowan Valley.

The Parowan Range of mountains parallel these valleys on the East and the lower ranges of Iron and Black mountains border on the west. Two important and thriving cities, Cedar and Parowan, with a population of about 2000 and 1500 respectively, each with banking institutions of recognized ability and strength, modern water systems, and electric lighting systems together with churches and schools equal to any in the state; six other smaller towns are located on mountain streams on the east side of the valleys. In Cedar City is located the Branch of the U. A. C. active in advancing agriculture. To the west lay stretches of open country with deep, rich, fertile, responsive soils, apparently yearning and waiting for the touch of human energy, intelligently directed, so that they may respond with fields of corn, stack of alfalfa and Sudan grass, pits and carloads of potatoes and the golden fields of grain, in such quantities that would employ an army to gather them.

### Character of Lands

It is estimated that about two-thirds of the areas above mentioned are susceptible to dry-farming. A survey of conditions recently made would seem to justify this estimate. That the lands are rich in character and susceptible to the production of crops is evidenced by a vigorous growth of native vegetation. Almost the entire areas are covered with a thrifty growth of the black sage and rabbit brush intermixed with a variety of native grasses.

The Parowan valley is known as the "home of the big sage" some growing as high as 14 feet with a trunk 24 inches in circumference. This type of sage extends throughout the entire length of this 45 mile stretch. Rabbit brush as high as ten feet can be seen on some of the lower sections of the valleys, all indicating splendid fertility and strength in the soils.

It is well for those selecting lands for dry-farming to know that the sage brush is the best guide they can have of the productivity of the soil. It is the symbol of fertility. Where it predominates the soil always has a good texture, being well filled with humus, and the plant food available. Of course the more vigorous the growth of sage the safer we are in depending upon the producing power of the soil. The sage brush lands generally are our best responding lands to dry-land agriculture, and so, from all experience of the past, we are firm in our conviction of the lands in these valleys in possessing rare qualities or the production of crops.

### The Sub-soil

An examination shows that the sub-soils vary in character very materially within short distances. We may have a fine grained clay, ideal sub-soil in one part of a quarter section and a few rods in either direction may reveal entirely different characteristics, with alternating strata of sand and clay varying in texture.

However, even the poorest of these subsoils are not wholly discouraging to dry farming, for the native vegetation seems to thrive well, and such dry-farm crops as have had proper cultural methods have given splendid yields on these lands. The soils taken as a whole can be said to possess satisfactory qualities for the growing of dry-farm crops.

There are certain limited areas, principally in the region north of Paragoonah where grease wood and shadscale prevail, that are too heavy stubborn and mineralized to justify any attempt at dry-farming.

### Elevations and Temperature

The lower parts of the valley are less than 5,700 feet and the crests or summits about 6,000 feet above sea level with temperatures about equal to Salt Lake and Utah Counties and two to four weeks longer frost-free period. It is not excessively hot nor extremely cold at any part of the year. Generally a long period of good growing weather.

### Precipitation

The rainfall is the limiting factor here for successful dry-farming and might be considered rather too limited from a study of the weather records alone. The average yearly precipitation given for Cedar City covering a period of nine years, is 12.53 inches and for Parowan covering a period of twenty-two years is 12.72 inches. In many parts of the valley, however, especially near the southern rim of the valley, it is stated by the settlers, there is an excess of this amount. The snows fall much deeper and lay longer in the Kanarra district.

The important thing to study in connection with the precipitation is the availability of the fertility in the soils. Since water will do better duty to plants from fertile soils than from poor soils, and the experiences of all farmers in this valley prove the splendid responsiveness of these soils, we feel confident that with a practice of the best methods the precipitation is ample to give profitable crops, under a system of dry-farming.

The encouraging yields of corn and potatoes from first plowing with only one year's moisture available for such crops are conclusive evidence for our contention.

The discouraging conditions that prevail in the western part of Iron County must not be confounded with conditions that prevail here.

The soil, the vegetation, the climate, the precipitation, and the crop producing influences are as widely different as though they were in another world. The high, hot winds of summer and the cold, bleak blasts of winter in the Escalante Valley are not known in the eastern valleys.

### Water Possibilities

Apart from the splendid fertility of

the soil, possibly the one great factor that lends encouragement and vivacity to the whole section is the unusual water possibilities known to exist.

Besides the surplus high waters of the mountain streams that can be applied on large tracts of these lands, surface waters in good quantities, can be obtained by digging wells 12 to 30 feet.

As the pure soil runs down to these depths, these wells are dug at very little expense making it possible to get water for culinary and stock purposes at commencement of operation and making it desirable to build a home and live on the farm.

Artesian water of a pure quality can be obtained for at least a 30 mile stretch in these valleys at a depth of 50 to 500 feet. Dozens of such wells have been driven at very small costs scattered pretty well over the district and while a few only have not given a flow, not one trial has yet failed to bring water within 20 feet of the surface. Several wells are flowing nearly as much as the pipes will contain. Hundreds of acres are being irrigated from them.

This furnishes a most satisfactory base for future development. By use of the flowing wells and the pumping plant, it will enable the farmer to supplement his dry-farm methods by the application of sufficient water to not only insure his crops against a crisis of drouth, but to greatly increase his yields, as such waters can be applied with profit at any time of the year.

### Lands All Owned

The lands are practically all taken and held by individuals and companies

# SUNRIPE Stock Feed

It's here! "SUNRIPE" STOCK FEED is now on the market. It is the newest and last word in Stock Feed; prepared by a special process, has full strength and food value.

Sunripe Stock Feed is a well balanced mixture of highly nutritious grains and grain products. A far better feed than straight grains for horses and stock. They like it—thrive on it. It supplies all the needed elements, as only a specially prepared food compound can. Use it a short time and you will see a decided change for the better in your stock. At all dealers.



Be sure you ask for "SUNRIPE"

**UTAH CEREAL FOOD CO., Ogden, Utah**

in tracts from 160 to 4,000 acres. Not more than one-tenth of this vast undeveloped empire is put to beneficial use, only as it serves the purpose of grazing a few head of cattle. The communities have obtained their living in the past, mostly by making use of the ranges. Since these areas have come into market and the ranges are narrowing and becoming depleted of their usefulness, the lands must be vitalized with cultivated crops if the live stock industry is to become efficient and modernized.

The section at present is in the state of transition from producing inferior meats off the range to fattening better grades from the highly nutritious and cultivated crops. The old operators find it a difficult matter to adjust themselves to the new system, and shirk the task of removing from the saddle on the horse to the seat of a four horse gang plow.

New blood with modern ideals of farming is the element needed on these lands to complete the transition and to bring a happy redemption. Human energy wedded to the soil, working out its possibilities, is the one thing needed to bring this section to the front as one of the important crop producing sections in the state. It is no wild vague dream to say it is possible for 80,000 acres of the lands in this section to yield annually more than a million dollars in revenue and to add four or five times that amount to the value of the lands.

### Market Facilities

The section is accessible either to Cedar or Parowan from Lund station on the Salt Lake Route by an auto highway of 30 miles. At present carloads of flour are being shipped in



and prices for all farm products are from 25 to 40 per cent higher than in Central Utah, with the demand very strong, and should conditions change from importing to exporting, the distance to the railway is within easy reach to drive the crops on "four feet" instead of "four wheels." Besides it is highly probable that the railroad would come into the districts long before the local market would be glutted with its own products.

#### Conclusion.

There is so little to discourage and so much to encourage the proper practice of dry-farming in this region, the seasons being so agreeable, the lands so rich and responsive, the precipitation giving good hope, the markets so beneficial and the water facilities so attractive—almost allying—that it is wondered why more have not availed themselves if the opportunities afforded. Perhaps the one thing lacking was organization some force to give publicity and invite settlers on the lands on some satisfactory basis.

## Utah's Climatic Conditions

Agricultural Lesson

Prof. J. C. Hogenson.

### The Time of the Year in Which Rain Falls.

It will be observed that in the Northern Section there is quite a uniform rainfall from October to May, inclusive, while from June to September, inclusive, the rainfall is much less. The uniformity of rainfall is of importance because it results in the smallest possible waste. Sudden heavy rains are not desirable. It would be better if a slightly heavier rainfall would occur in June to aid the ripening plants.

In the middle section the rainfall is quite uniform. The rainfall for June is lower, for July slightly higher. August and September receive more rain in the middle section than in the northern section, but October and November receive less. March is the wettest month in both sections.

In the Southern section the climate is milder and more uniform throughout the year so that a greater loss by evaporation is likely to occur. The rainfall, too, is not much heavier in the winter than in the summer.

It is sometimes thought that it matters little when the rain comes just so there are from 12 to 15 inches during the year. From collected data, however, it would appear that we ought, at least, to have 4 inches during the growing period of the plant. Experience shows that rains in June and early July are of the greatest benefit to dry farm crops. If the precipitation during these months comes in one or two rains, the crops profit immensely by it, but when a large number of small showers make up the total, the effect on the crop is not so favorable. The main dependence of the dry farmer, however, must always be the rains and snows of winter and early spring that sink into the soil and remain stored there.

#### Climatic Conditions.

Plants thrive best only in certain temperatures and when they receive a certain amount of sunshine. Both of these conditions are well furnished in Utah. The state has an average of

about 55 per cent of clear days; 25 per cent that are partly clear, and 20 per cent that are cloudy. In the summer the proportion of sunny days is much higher. With regard to temperature, the average from May to September inclusive is 65 degrees F. which is very favorable to plant growth.

#### The Humidity of Utah Atmosphere.

It is natural to suppose that the air in the vicinity of the lakes of Utah, because of the large amount of water which evaporates annually, would be much more moist than the air in other portions of the state removed from large bodies of water, and, as a consequence, evaporation from the soil there would be less rapid.

By humidity is meant the actual amount of water held by the air as compared with the highest possible amount (represented by 100) that it can hold. The higher the humidity the wetter the air. The average humidity for Utah atmosphere is 38. The dryer and warmer the air, the more rapid will evaporation from the soil occur. This being the case, the dry farmer in Southern Utah, where the air is drier and warmer, must give more careful attention to the proper treatment of his soil for the conservation of moisture, than the farmer in the North. There is, however, not enough difference to affect seriously the possibility of dry farming in any part of the state.

#### The Soils of the State.

The mountain ranges of Utah are made up of massive beds of limestone and dolomite, heavily charged with sand. The surface rocks be long to the silurian era, while deeper down are found limestones from the carboniferous era.

The great depth of the soils make it possible to store a large quantity of water in them. Under common conditions each foot of soil is able to retain  $6\frac{3}{4}$  inches of rainfall.

A lake at one time covered the greater part of Western Utah and the greater part of Nevada. The outlet of this lake was at the north end of Cache valley. That this vast area was once submerged is easily proven. Standing on any elevated ground, the beach marks may easily be traced for miles along the sides of the mountains. Above the water line the mountains are cut up into great furrows and separated by sharp angular ridges. Below the water line all is rounded and smooth in outline.

Utah soils are rich in plant food. They are alluvial in their nature. The mountains having been the source of all the soils, in many cases soil to the depth of 500 feet has been washed from the mountains into the valleys. There are, of course, shallow soils also. These occur mostly on the benches near the mouths of canyons, which are old deltas left by lake Bonneville. In many parts of the state the soil is underlaid by water. The most common cause of this is a stratum of rock or clay several feet below the surface which continues in an unbroken sheet to the mountains and along which water can seep.

#### Soils and Dry Farming

The percentage of moisture in sandy soils is much smaller than that in clay. Because sandy soils contain less water it must not be inferred that they contain less water available to plants than do clayey ones. Water is held as a film around soil grains. If the thickness of this film is the same

in different soils, the available water will be relatively the same. Since sand grains are larger than clay grains, there will be a smaller number in a given volume, or weight of soil, and a smaller amount of water will produce a water film of a definite thickness. It is said that 4 per cent of water in a sandy soil is as valuable to the plant as 12 per cent in a heavy clay soil. The greater portion of the soils of the state are suitable for arid farming, not only clays and loams, but also sandy soils under proper treatment will give good yields to the dry farmer.

#### THERE IS PROFIT IN SOIL

There is every reason for all of us to see that the greater part of our wealth comes from the soil. Even the bankers are beginning to see this fact who have heretofore been so slow in opening their eyes to the fact, and as a consequence are now co-operating with the farmers in helping them to get the greatest returns from their land. The idea of the bankers is to now help to show the best methods and to stimulate the people to use them. Many of the individual bankers are now lending much assistance in the solution of local agricultural problems by helping the farmers to branch out by furnishing them with capital to build and otherwise improve their farms. Also to bring in blooded stock and also in many other ways.

All of this means that a fuller and keener life has come to the rather dull existence of the past history of farming, and that made farming a term of ridicule and of reproach.

The American farmer is to be congratulated upon the stand he has taken in the community in at last finding himself and also that the bankers interest in him is assured.

There is another question right her which fits it very well with the subject at hand, and that is, the getting of the money back on to the farms which has been much discussed at many conventions recently under the head of "rural credits." But it should always be remembered that rural credits is a problem of slow development and not one of charity. We have no downtrodden peasantry in this country, and the legal rate of interest has somewhat restricted the mortgage sharks. Getting completely rid of these fellows is important, but it is much more important to secure in all parts of our country the best possible investment and use of agricultural capital. If the American farmer can't pay his way, nobody can. The real need is better organization of the farming business by means of rural co-operative banks, which will not only do the banking for their members, but will also give them the benefits of centralized buying and selling. The banking will be based on the actual known values of the neighborhood and the trading operations will be real and not speculative. Along with individual zeal and skill in farming will go a co-operative use of the farmers' business strength. Rural credits must be taken up as a part of this larger problem of agricultural business organization.—Exchange.

#### PROVING IT

"That clerk is asleep all the time."  
"Well, I said in my reference that he had a very retiring disposition."

## VICO Automobile OIL



**L**UCKY is the auto owner who selects "VICO" from the start; it means more power and longer life for any car. Vico Automobile Oil is made in three consistencies—light, medium and heavy. One of which is especially adapted to the lubrication of your car. Ask your garage man to clean out your crank case and refill with "VICO." Makes good at all temperatures.

Utah Oil Refining Co.  
Refiners  
Salt Lake



"EVERY DROP COUNTS"

## Sheep Dipping

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DIP HAS DIPPED

6,000,000 SHEEP

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#### FOR SALE

At half price, one registered pure bred Percheron mare seven years old. Weight 1830 pounds. Imported from France by J. H. Moyle. Also her two year old stud colt is for sale.

PARLEY P. PARRISH

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## BUTTER WRAPPERS

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113 acres one mile South of Garland a quarter of a mile from paved street. This is a nice level tract of land, together with full water right from the Bear River Canal. This Canal furnishes ample water for all irrigating purposes. This place can be purchased with a small cash payment at time of purchase, 10 years on the balance at 6 per cent.

1, 2 or 3 acres located between 14th and 15th South on West Temple Street. This is good sandy loam soil and can be purchased at \$500.00 per acre, small payment down and monthly payments on the balance.

5½ acres on 5th East between 15th and 16th South, with a 4-room house, good cellar, chicken coops, and other outbuildings. Would like to exchange for a house in Salt Lake City. If you are desirous of getting on a few acres close in, call and see us and we think we can make a trade with you.

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There is no make-believe about Utah-Idaho Sugar. It's real quality, through and through. It is just the juice of the finest sugar beets—purified and crystallized.

Utah-Idaho Sugar thus produced, is of supreme excellence. Chemical and practical tests prove that it is the equal of the finest imported sugar.

Confectioners and food manufacturers throughout the United States, prefer it to the imported product. Housewives throughout this entire mountain country are being won by its meritorious qualities.

Order Utah-Idaho Sugar by the sack. It's more economical when purchased in quantity.

**UTAH-IDAHO SUGAR**  
ABSOLUTELY PURE

## THE HOME

### HOME SANITATION.

When we think of the housekeeping of today and compare it to the time of our grandmothers we feel we have made very rapid strides in home sanitation.

We all know something about the days when the houses were without screens and the flies were kept from the table by means of peafowl feather brush wielded by a little girl perched on a stool. At the same time the floors were covered with heavy carpets, the doors hung with heavy curtains, upholstered furniture in the parlor, and night air in the bed room would have been plain suicide.

Dare I say the bed-bug, too, has had its day? We hold up our hands in horror at the mention of the bed bug, and yet we are putting up with the house fly, or typhoid fly, that in a few years will be considered just as great a disgrace as the bed bug. At one time we thought the fly just a nuisance because it tickled our noses and specked our furniture. Today investigation shows that it is born in filth. There is nothing too filthy for him to eat. But since the fly is here our question is how will we get rid of it? This can be answered in four words: Destroy their breeding places.

See that the stable refuse is used as a fertilizer rather than a home for the fly. Lime and coal oil should be sprinkled about the stables. Keep the garbage bucket covered and dispose of all decaying vegetables. In spite of this precaution flies will invade the house. Formaldehyde exposed in a closed room is sure death to the fly.

In our pantries and cellars there has also been a great change. David Copperfield said his mother's store room was a dark room and when the door was open and she was in there with a light it let out a moldy air in which there was the smell of soap, pickles, pepper, candles and coffee, all in one whiff. We should be careful about the estimate of the amount needed to be stored away and then all decaying matter should be taken out from time to time. The theory that a store room must be tightly closed and dark, no longer holds good.

The surface wells are especially dangerous. The filth from the barnyard is often drained into the well to poison the family and cattle. The water may be perfectly clear and sparkling and yet be a deadly poison.

To keep a thoroughly sanitary home we must understand sanitary conditions within the house as well as without. Let there be daily inspection, sun-bathing and ventilation of every room. Use a vacuum cleaner when it is possible to obtain one. If this is out of the question damp tea leaves, coffee grounds, or bits of damp paper sprinkled over the rugs before sweeping are a great help. Wipe off the furniture with a dustless dust cloth made by soaking a piece of white cheese cloth in paraffine.

Perhaps one ought not to say that many homes of today are barbaric. They are at least museums. Savages and half civilized people delight in piles of things. The more tattooing, the more ear rings, the better. A few good pictures decorate a home but

too many cheap decorations are only dust catchers. S. S.

### WORK TOOLS FOR USE IN KITCHEN

Edith C. Salesbury.

The question is often asked among housekeepers, "What tools outside of cooking utensils do you consider necessary in the kitchen?" The size of the family and the amount of work to be done will determine the answer somewhat, although there are a few tools—most of them very inexpensive—the absence of which invariably makes work harder or increases the time spent in accomplishing it.

Among these necessary tools a set of good steel knives is most important. This is generally a common lack in the average kitchen. It would ruffle the temper of an angel to try to cut and pare, chop and scrape with the knives that most housekeepers use. Sometimes a worn-out butcher knife is made to do duty for everything; other times it is a blunt and broken case knife or the remains of a paring knife that the housekeeper tries to use for any and every job, that requires a knife. Sometimes, too, she does not hesitate to use her one knife as a can-opener and cork-screw. No wonder tempers are spoiled with kitchen work. There should be in every kitchen a good meat knife, a spatula or palette knife with its long flexible blade and dull edge, and one or two case knives. The knife collection should also include a medium-sized pair of scissors that will cut close to the points for these will be found most useful in cutting raisins, pine-apple, string beans, removing the seeds from oranges and grapefruit and a dozen other jobs. To keep these knives in good condition there should be a small grind-stone or an emery wheel to attach to the work table. This little tool can be bought for \$1.25 up and will pay for itself in a remarkably short time since the average woman is useless when it comes to getting good results from stone or steel. One may not be able to have nearly all the labor-saving devices, but a half dozen knives, a practical implement to keep them in good condition and then a determination to use them in the right way is possible to every home.

### CLEANING CARPETS AND RUGS

If you have been so unfortunate as to spill grease on your dining room rug, heat some dry bran or meal in the oven and spread it over the place. When cold sweep it off and if one application does not clean it thoroughly repeat it. Ink may be removed by washing the spot with hot skimmed milk diluted with an equal quantity of water.

If necessary to wash an ingrain or rag carpet, take it up, take the widths apart, and after a thorough beating, wash one width at a time in the washing machine. Two or three hot suds will be needed, then it should be thoroughly rinsed and hung on the line to dry. Do not attempt this work without a good machine and wringer but with these aids it is not a difficult

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Double Service Tires are made double the thickness of the best standard make tires. This 100% greater wearing surface naturally gives that much more mileage and service. The average of 12 miles of tough makes these tires absolutely punctureproof. These tires excel all others for use in the country over rough and rugged roads as well as on hard pavements. They are as easy riding and resilient as any other pneumatic tire—the air space and pressure being the same. They are the most economical and "care free" tires made and are used where tires must be depended on and tire troubles cannot be tolerated. Many Double Service style tires are in use in the U. S. government and European War service. Our output is limited to a certain amount, but for a short time we offer the following reduced special prices as an introductory offer:

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Tires Tubes	36x4 in.	38x4 in.	40x4 in.	42x4 in.	44x4 in.	46x4 in.	48x4 in.	50x4 in.
36x4 in.	\$8.60	\$2.30	\$8.60	\$2.30	\$8.60	\$2.30	\$8.60	\$2.30
38x4 in.	10.85	3.10	10.85	3.10	10.85	3.10	10.85	3.10
40x4 in.	12.75	3.50	12.75	3.50	12.75	3.50	12.75	3.50
42x4 in.	15.75	4.20	15.75	4.20	15.75	4.20	15.75	4.20
44x4 in.	16.70	4.35	16.70	4.35	16.70	4.35	16.70	4.35

All other sizes not included in above list also furnished. Non-skids at 10% additional. Terms: Payment with order at above special prices. A 10% discount allowed on orders for two or more tires. All personal checks must be certified. Try these tires now and be convinced of their very high qualities. Sold direct to the consumer only. Descriptive folder upon request. Write for it. Double Service Tire & Rubber Co., Akron, O. Dept.

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**Be thinking now of next Silo filling**

The farmer with a big, broad smile these days, is the one who was ready last fall to hustle his corn into the silo on a minute's notice, and wasn't worrying about getting it there, either, because he had a

**BLIZZARD**  
**Ensilage Cutter**

The Blizzard is the tried and true cutter for the farmer. Simple, easy to run, safe. Small engine runs it. Big cutting capacity and unlimited elevating capacity. Self-feed table saves one man. Steady as a clock. Many in use after fourteen and fifteen years. Repair expense very small.

Come in—get a catalog and let's talk over the Blizzard  
Intermountain Concrete Co., Ogden, Utah.

Sold mounted or unmounted



task, and the carpet will be fresh and clean again.

Brussels, Axminster or velvet rugs require a different treatment. Tack them on the floor of an unused room, prepare a good suds by dissolving gold dust washing powder in boiling water, and scrub a little at a time, just as you would scrub a floor. Go over the entire surface of the rug in this way, changing the water as often as necessary, rinsing with clear water, and wiping as dry as possible. Open the windows so it will dry quickly. You will find the rug clean and the colors as bright as new. Brussels and other heavy carpets may be cleaned in this way, taking one width at a time, and scrubbing and rinsing it before beginning another.—E. J. C.

#### APPLE SALAD

Cut the apples up in a French dressing, put celery with them, cut up fine and serve on lettuce leaves with a few nuts put over the top.

#### MOLASSES COOKIES

Sugar 2 cups, lard 1 cup, molasses 1 cup, 2 eggs, 1 teaspoon each of all kinds of spices, 1 teaspoon soda, in 1 cup boiling water. Flour enough to make a stiff dough.

#### GRAHAM CAKE

One cup sugar,  $\frac{1}{2}$  cup butter, 2 eggs,  $\frac{3}{4}$  cup milk,  $2\frac{1}{2}$  cups graham crackers rolled fine. 1 teaspoon baking powder, flavor. Any kind of filling between layers.

#### HOW TO POP CORN

"With its customary thoroughness, the U. S. Department of Agriculture has laid down rules for popping corn so you can get the largest possible amount of buttered crispness and almost no 'old maids.' First have a good hot fire all ready. Then measure out your popcorn into the popper. Put in just enough barely to cover the bottom of the popper one kernel deep. If you take more the popcorn will not be so crisp and flaky.

"Start the corn heating slowly, so the kernels will not scorch. The right time for good corn to start popping is in just a minute and a half. If it takes longer you either have too little heat, the corn is poor, or there are drafts in the room which cool the popper. Be careful also to have the corn free from chaff, which a burnt-taste even though the kernels themselves are not overheated.

"One pint of unpopped corn will give from 15 to 20 pints of popped corn when these simple rules are observed."

#### FARMERS ARE WARNED.

Alex Lofgreen.

Those who make it a business to take advantage of the public are watching every opportunity to work their tricks. The farmer is usually considered to be an easy prey so I find a great many fraudulent and misleading schemes laid to catch him. It is a fact that many farmers do not take the trouble or they do not have the chance to inform themselves upon all lines so they are often taken advantage of because of their lack of information. Not many gold bricks are now sold to farmers, not as many perhaps as to city people, but there are other frauds that he must be on his guard against. The latest is the rural credit promoter.

The United States department of

agriculture announces that it has received letters from a number of farmers who have subscribed for stock in rural credit companies, including so-called co-operative companies which appear to have no real co-operative features. In some of these letters the complaint is made that the agents selling the stock make misrepresentations as to when the loan may be obtained by subscribers and that the companies later disclaim responsibility for the statements made by the agents. In such cases the subscriber must wait an indefinite time for the promised loan and go on making payments just the same on the stock he has agreed to take. Farmers are warned to be cautious in dealing with these agents.

The rural credit idea is a new one and it would be well for farmers to be pretty well informed upon the subject before they sign any contract. Agents will often promise many things not in the contract in order to get a subscription which means a commission to them. It should be remembered that what the agent says is not what counts, but what is in the contract to which one signs his name. My advice to farmers who are thinking of buying stock in any kind of a company would be to consult a competent attorney and be sure the company is organized on a sound and reliable basis before paying over any money. I do not wish to be misunderstood as saying that all rural credit associations that have been formed are unreliable or fraudulent; the point is for the farmer to separate the good from the bad. Any reputable association will invite investigation while the other kind will not.

#### GROWING CERTIFIED

##### POTATO SEED

(Continued from page 3)

lect seed plats are under way and are being given the very best cultivation, irrigation and care. At blooming time the state or county agent will make inspections to see that odd varieties are culled out and that wilted or diseased hills are dug out and destroyed. Hill selection of seed from the extra high yielding hills of good type from healthy vines will be made. After digging, a final official inspection will be made of the seed crop produced and if it proves to be superior, it will be covered by a state tag of inspection.

In this manner all growers participating will not only be raising the standard of their seed for their own planting, but if a surplus quantity of such certified seed is produced an outside market demand for Idaho certified seed potatoes will be developed. This will benefit both the buyer who wants seed of extra fine quality and the grower who can readily command a premium upon such a product.

This plan of seed certification is heartily endorsed by the United States Department of Agriculture and Idaho is the first state of the Western states growing potatoes under irrigation to put such a plan under way.

The Agricultural Extension Department of the University of Idaho is guiding and establishing this work and will adopt measures to safeguard the use of these certificates upon potato seed either sold within the state or shipped out to other states for planting.



## You Can't Find their Equal at this Price!

Good, sturdy hosiery for every member of the family at 10, 15 and 25 cents. Our location and manufacturing economies enable us to sell Durham Hosiery for a price that makes home sock knitting expensive.

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is knit strongest where the greatest wear comes. Heels, soles and toes are reinforced, and tops can't pull from the bottoms. Famous Durham dyes give permanent colors.

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Ask your storekeeper for Durable Durham Hosiery, and to show you the 25c Durham mercerized hose.



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by using U. S. Government Land Scrip. We can furnish any kind of scrip at market prices. We have a few hundred acres of scrip on hand which has been "APPROVED" by the Department at Washington. Scrip comes in 40, 80 and 160 acre tracts. Prices on request.

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## That Good Taste

Certainly fruit that is canned at home tastes just right—and it's always economy to can fruit. Every housewife realizes that the place of home-canned fruit on the family diet list can only be taken by some food that is more expensive—while the food value of both the fruit and sugar is greater in proportion to the cost.

### CAN FRUIT AT HOME

## You'll Eventually Use This Bread

The time is coming, and it is not far distant, when you and every other housewife will use Royal Table Queen Bread exclusively.

Not boastfully do we say this. The inner goodness of Royal Table Queen will compel it. For in this bread are found qualities that no other bread possesses.

Only because of the enormous output and high efficiency of the Royal Bakery, is it possible to offer—

## ROYAL TABLE QUEEN

"The Perfect Bread"

for the "common bread" price?

Ingredients from which it is made, cost considerably more than those used for ordinary breads. Its exceptional flavor wins every palate.

Why not surprise the family by serving "Royal Table Queen" tonight, instead of the "usual" bread?



Your grocer sells it, fresh, every day. FREE Flags of All Nations and beautiful Felt Pennants with the large loaves.

**Royal Baking Co.**  
Salt Lake City

When you answer the advertisements in this paper tell them you saw it in the Utah Farmer. Always buy advertised goods.

## "Wonderful Medical Discovery"

Physicians or Patent Medicines—  
Good, Bad and Indifferent.

Eighth article by the State Dairy and Food Dept. and the State Board of Health.

These are, indeed, days of wonders. Inventions have piled upon inventions—the wireless, the aeroplane, the submarine, poison gas (if the latter can be classed as wonderful) until folks are ready to believe most anything. It is this fact that the makers and sellers of bogus cure-alls are basing their "wonderful discovery" claims on these days. Seldom, if ever, do we pick up a newspaper without reading of some new "wonderful discovery" in the line of a cure for something or other that "Doctor" Somebody-or-other has made.

If one could believe everything one reads, the natural conclusion would be that these old frauds, who concoct patent frauds to cheat the sick public with, are sitting up nights, working with secret chemicals in finely-equipped laboratories for the sole purpose of healing the sick. It would appear that a new "discovery" is made at the rate of about one every hour. At this rate sickness would vanish from the earth within a few years, if all these statements were true. But let us investigate the laboratory seances of some of the "discovering" frauds.

In the first place nine out of ten are like the arch-faker who was driven from so many cities—Dr. Samuels. The doctor claimed to heal all diseases through the eyes and he prepared an eye wash for which he charged a high price per ounce. Dr. Samuels was a "discoverer" of a wonderful cure. What is more—he had the testimonials to prove it.

It happens that the writer of this article lived in the same middle western city where "Doctor" Samuels had his headquarters. He visited the Samuels "laboratory" a good many times. "The laboratory" was a place of busy typewriters and nimble-fingered girls who were kept busy opening letters and counting the checks therein. All the discovering that Samuels ever did was to discover that the world is full of suckers. He discovered too late that the federal officers were on his trail. Now he is doing time, according to last reports, for using the mails to defraud.

A favorite scheme of these artists is to hire some expert writer to get out attractive literature telling in a newsy way of these discoveries. These are sent to all the country newspapers. Now in a country town news is scarce and hard to get. Anything that savors of news is greeted with joy as a space filler. Along comes an apparently bona fide news item telling of a discovery of a new medicine with no apparent advertising in it and the editor, if he be gullible or careless, prints it in full as news. Other editors see through the joker. Perhaps, and, when the discoverer learns that they are wise, he pays good cold cash to get it printed. And it generally is printed. Thus the discoveries are made to pay big dividends.

In the matter of patent medicines there are, as we have said before, good, bad and indifferent kinds. Now

this holds true as to physicians. It holds true as to druggists. There are many really educated physicians conducting nostrum establishments because of the money there is in the business. So are there many quack physicians—shyster doctors—who are faking the public under the guise of regularity.

The difference between the bad patent medicine dispensers and the bad physicians is that there are so many of the former and so few of the latter. The renegade physician's business seldom thrives. His frauds are discovered because of the personal contact which his customers, not patients, have with him. But the dollars roll in rapidly to the far-away, mail order physician. Distance lends enchantment to the view and the wonderful physician you read about might not be wonderful at all if he lived in your home town—if you knew him to be the faker that he really is. And besides advertising physicians are always looked on with suspicion while the ordinary person thinks nothing wrong that, what they assume to be legitimate cures, are advertised with the most glowing and glaring lies and promises possible.

In the matter of character, that of the physician who charges high prices for colored water or, perhaps, stimulants that can be bought at any saloon, is every whit as black as that of the patent medicine maker who performs the same operations on the ill. And in that black characterized class also are the druggists who take their customers own diagnosis for ailments and counter prescribe merely to get the money for something they know there is a good profit on.

Many of the medicines that this department feels need exposing are those that have real merit but whose makers are not content with the profits that must accrue to those putting out meritorious goods—they must needs add the circus poster scheme of the charlatan.

Now we are going to speak right out and say that we refer particularly to Cuticura soap and ointment. All of you know what these things are; you know their merits; you know their reputations are old and good; and you know the scare-head, exaggerated claims the company is putting forth—claims that almost make honest people think that there is something bogus about the old stand-bys after all.

Cuticura is a good soap; it is a good ointment—if we are to believe the word of those who have used them for half a century or more. But when the Cuticura company advertises that their soap and ointment will absolutely cure all sorts of skin diseases; that eczema dries up under its use within a few days, and all that sort of lying nonsense, then the Cuticura products come under the same cloud that hangs over the other medicine makers and their advertising men who deal lightly with the truth.

The next time you read about a wonderful medical discovery or of some positive cure for anything from corns to locomotor ataxia, just read it carefully and see how really funny it is. Never take a fake medical advertisement seriously. They are really too valuable as pieces of humor.

If you are not under discipline or restraint, you are not amounting to much.

## THE USE OF



## Grease and Motor Oils

Cuts down the cost of lubrication and by detracting from the deterioration of the machinery, cuts down the cost of the machinery itself. An ideal lubricant for farm machinery.

Endorsed by leading miners, manufacturers and agriculturists—it is the best.

Ask any engineer—anywhere.

Write for liberal free sample—Postpaid.

## Guarantee Tire & Rubber Company

427-429 South, Main Street  
Salt Lake City, Utah.

## WHITE BLOOM SWEET CLOVER

J. W. Nixon.

My experience extends over 28 years in handling alfalfa and clover.

There are various kinds of clovers on the market, but less is really known of the white bloom sweet clover than of any other variety. Until recent years this variety has been regarded by farmers as a weed and a pest. Because of its wonderful fertility, it is found growing along the road sides, streets, railroad tracks, on dry deserts, and in damp places alike, but, accidentally, its worth became known by crowding its way onto the farmers and covering land uncultivated for a season or two and then put into crop with such astonishing results that led to investigation and experiments at planting of this clover, which has justified the statement that there is no other plant known that will so enrich the soil by depositing nitrates and humus therein.

This sweet clover will revitalize lands that have been worn out by successive cropping. It has the ability to take the nitrogen from the air and transform it into nitrates of the soil. The nodules of the roots of this plant are inhabited by the same kind of bacteria that are so useful in the production of nitrates so essential to the growth of all grain crops. Besides this, the roots die the second year from planting and, through their decay, the soil is again enriched.

In addition to this, many farmers have adopted to custom of plowing this plant under green when about 20 inches high and their general conclusion is that this will enrich the soil equal to three inches of barn manure.

I quote from Prof. Hughes of the Iowa experiment station, Ames, Iowa, November 4, 1915. "Sweet clover is recognized as the greatest soil builder



which we have. Each acre of sweet clover will add three or four times as much nitrogen to the farm as red clover. It has other uses, however, in addition to its soil-building properties. At the Iowa experiment station, sweet clover has been grown for several years and each year we have come to think more of it.

"Livestock eat the hay with a relish after they have become accustomed to it and if the clover is cut early (when about two feet high) it has, apparently, the same feeding value as alfalfa. The sweet clover has been used very successfully for pasture purposes both with sheep and hogs. It is possible to pasture all kinds of stock on sweet clover since there is no danger of bloating with it.

Contrary to common opinion, it is not at all difficult to get rid of sweet clover as it is a biennial—the same as red clover."

I desire now to point out some advantages of sweet clover over alfalfa. 1st. Sweet clover will grow and thrive on soil too heavy or too poor to grow other legumes.

2nd. All kinds of stock can be pastured on sweet clover without danger of loss from bloat.

3rd. Sweet clover is more resistant to cold than alfalfa.

4th. It produces seed abundantly without fail.

5th. A stand so poor as to be worthless for hay or pasture will produce a heavy seed crop.

6th. It is the best known plant for improving worn out soils and it is the BEST BEE FOOD known. These advantages are greatly in its favor.

In my recent visit through Colorado, Kansas, Nebraska and Missouri (during March, 1916), marketing this sweet clover seed, I was more confirmed than ever in my belief that sweet clover was the most profitable crop a man could raise, especially where his land needs nutrition.

Here are some of the things I heard from the farmers themselves, one of whom had 2000 acres:

"Sweet clover has renovated the land to such an extent that, after two years' growth with the last crop plowed under, the land will produce full crops of tobacco, corn or wheat."

One man said it had nearly doubled his crop. Another said he had planted ten acres of his farm into clover and the following year the corn on this portion was 18 inches higher than the rest that surrounded it. (I made one sale on the strength of this man's testimony to a bystander who heard it but who, up to that time, had regarded clover as a weed.)

A great many questions are asked me regarding sweet clover, the most important of which I list below with the answers for the benefit of my readers.

1. When is the best time to sow sweet clover seed?

As a rule it can be seeded any time during the late winter or early spring or even late in the summer when the land is in good condition for planting of seed. Prepare your seed bed just as you would for alfalfa but don't plant too deep—on unirrigated lands from two to three inches deep at the most; where irrigated up, one-half to one inch is better.

2. How much seed should be sown to the acre?

Anywhere from 12 to 18 pounds, according to conditions. Twelve is usually enough but to the inex-

perienced it might be well to plant a little more.

3. Will stock eat sweet clover?

Yes—eagerly after they have become accustomed to it, but they have to learn to like it, just as a range steer learns to like corn or a range horse learns to like oats, neither of which like them at first. The same is true of sweet clover.

4. Can sweet clover be grown on any soil?

It will grow where most other plants fail. If the soil is not water-soaked all the time it will grow and on the driest road sides it will thrive.

5. What kind of climate is best for sweet clover?

All kinds. It does well in every state of the union from Canada to Mexico. Give it half a chance and it will grow. All kinds of climates and all kinds of soils look alike to sweet clover.

6. Isn't it pretty expensive to re-sow every two years?

The plant does not seed the first year. It can be cut for hay the first year. Cut it early the second year or pasture quite late and then let it go to seed. It shells quite freely and will always re-seed itself for another year besides yielding you eight to fourteen bushels of seed worth from \$7.00 to \$9.00 per bushel. I know of a field of sweet clover that has been in 15 years without re-seeding or plowing and it is getting better every year. It is pastured every year up until about June with beef cattle when they are taken off and the seed allowed to ripen. The old roots die and enrich the soil and new plants come on next spring and make three or four crops of the finest hay you ever saw, then go to seed the second year and die and so on. This man is getting from \$50 to \$100 per acre for his seed crop besides about three months of No. 1 pasture and lots of it.

That pays, don't you think so?

This plant is growing very rapidly in popularity and is now being grown in most all parts of the Union. One farmer in Kansas had 2000 acres in last season and 's planting more this spring.

Sweet clover makes a forage growth of from 5 to 7 feet under ordinary conditions. Just think of what it will do for the fertility of the land after cutting one good crop of hay to plow the second crop under if you please or cut it for hay and then the second year raise a crop of seed (which should be cut before all the hulls turn black). Then plow under the growth that follows during the next two months as it will be one of the last plants in your field to yield to frost.

A dozen more pages could be written about sweet clover and not more than do justice to the plant or public, but I trust sufficient has been said to inspire a great many to give a trial which is all that will be necessary for its popularity.

A singer who recently passed an evening at the house of a lady stayed late. As he rose to go, the hostess said: "Pray, don't go yet, Mr. Basso; I want you to sing something for me."

"Oh, you must excuse me to-night; it is very late, and I should disturb the neighbors."

"Never mind the neighbors," answered the lady quickly; "they poisoned our dog yesterday."

## THE BUSINESS MAN'S CHANCE

(Continued from page 3)

per rations must be fed; third, low producing cows must be culled out; and fourth, proper shelter should be provided. The assistant secretary of the commercial club was delegated to foster an interest in these things.

Extension surveys of two dairy states showed that in one state the farmer using purebred bulls made a net profit of \$837 in a year, while those using grade sires made but \$439, and those using scrub bulls made but \$178 for their years work. In the other state, New York, the men using purebred bulls realized \$1,012 for their labor per year, while the men using grade bulls secured an income of but \$392 for a years work. Grade cows were used in all the cases cited. It was a difference caused by bulls only. Feeding proper rations often doubled the income. Poor bulls and poor rations were shown to be the principal causes of the dairymen's low income in every state in the union.

The business men's problems are now being attacked. The merchants and grocerymen are co-operating in buying and delivering their goods and are putting the task of buying in the hands of a competent experienced man, who deals directly with the concerns who are the source of supply, thus cutting out many middlemen and the traveling salesman who is becoming a tremendous burden for the retail merchant to carry. Only reliable, widely advertised standard goods are bought at prices that enable the retailer to sell better-than-mail-order-goods at mail-order-prices.

Today is the day of co-operation. It is interesting to note that the success of the most prominent men of the present day depended more on their ability to look ahead 25 years, than upon their great talents. While the old admonition "To cast your bread upon the water" has been always sound advice, it is more than doubly so today.

### THERE'S A REASON

The lawyer was drawing up Henpeck's will.

"I hereby bequeath all my property to my wife," dictated Henpeck. "Got that down?"

"Yes," answered the attorney.

"On condition," continued Henpeck, "that she marries within a year."

But why that condition?" asked the man of law.

"Because," answered the meek and lowly testator, "I want somebody to be sorry that I died."

### HOW IT HAPPENED

"How did the accident happen?" asked the Sympathetic Friend.

"Well, I'll tell you," replied the Man on Crutches. "The automobile was going pretty fast and all of a sudden we struck a wet place on the asphalt and there was a noise and the Doctor said: 'He'll be able to go around in about four weeks.'"

Wife—"Harry do you love your lamb?"

Harry—"Yes."

Wife—"Very much?"

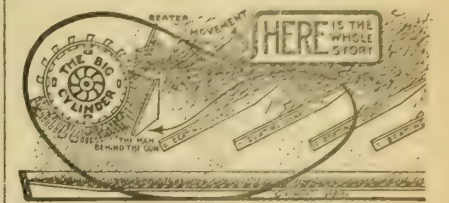
Harry—"Oh yes."

Wife—"Will you always love me?"

Harry—"Yes. Say, you woman, what have you gone and ordered sent home now?"

## GET THE GRAIN IN THE SACK

That's Why You Thresh



Some makers of threshing machinery get so interested in getting the straw out again after it gets into their separator that they forget where the grain belongs and run it right along with the straw. Their stackers work fine, but their cash register gets terribly out of kilter and generally rings up, "Paid Out."

## The Red River Special

ALWAYS LOOKS OUT FOR THE CASH

It makes money for owner or user because its builders are interested in getting all of the grain there is in the crop. They don't forget that the cash register attachment is connected at the sacker, not the stacker.

You'll find it right there where they put it if you buy or hire a Nichols-Shepard machine this season.

## Why not Get the Big Run?

If you are influenced by good neighborly opinion, you'll find a lot of it concerning Red River Special methods in the Home Edition of a lively little paper that tells considerable about profitable threshing. We'd be glad to send you the latest number. Don't forget to request a Big Catalog when you write for the paper.

## NICHOLS & SHEPARD CO.

(In Continuous Business Since 1848)

### BUILDERS EXCLUSIVELY OF THRESHING MACHINERY

Red River Special Threshers, Feeders, Wind Stackers  
Steam and Oil-Gas Traction Engines

36) BATTLE CREEK, - MICHIGAN



### WHY HAUL THE EXTRA BURDEN?

Friction means a shorter life for horse, harness and axles.

## MICA AXLE GREASE

Stops friction. Makes a perfect bearing surface.

Dealers everywhere

THE CONTINENTAL OIL CO.  
(A Colorado Corporation)



When you answer the advertisements in this paper tell them you saw it in the Utah Farmer. Always buy advertised goods.



## POULTRY

### SAVING THE LIVES OF HENS AND CHICKS

Lice, mites and fleas are more disastrous to poultry stock than all the host of diseases that chicken flesh is heir to. The best treatment for lice is to grease fowls with 33 per cent strength mercurial ointment (which is poison). Apply a piece of ointment the size of a grain of wheat to the flesh of the hen at the rear part of the body, covering a space of skin not larger than a silver quarter. Be careful not to use too much ointment, because if applied too freely the mercury will be absorbed by the chicken's system and egg production will cease.

For baby chicks that have head lice, anoint the head with carbolated vaseline or apply the mercurial ointment very sparingly. A little grease rubbed on the chick's head and under the beak will kill all lice lodging there and prevent development of the lice eggs. One application of the poisonous grease is good for a month and is better than dusting with insect powder.

Mites live in crevices of the roost, drop-board and nests in the day time and attack the fowls at night. They can be seen in the morning and look like red bugs, as they are filled with the blood of fowls attacked at night. Mites are eradicated by painting or spraying roosts and nests with the following mixture: Kerosene, one gallon; crude carbolic acid, ½ pint; lard, two tablespoonfuls. Melt the lard and mix with the kerosene, add the acid and shake the mixture well. Apply the mixture to all quarters where mites dwell, making an application every two weeks.

Where fleas infest a poultry house, it is necessary to spray 5 per cent solution of zenoleum, creolin, cresol or other coal tar disinfectant. Thoroughly soak the dust and dirt where the fleas live. This will kill them and their young. Then catch any fowls that have fleas on the side of face and under beak and anoint with the 33 per cent mercurial ointment. One application will kill every flea and prevent more from attaching themselves to the bird.

Cows and calves do well in much colder weather than we think, provided they are kept dry and sheltered from the driving winds and have a dry bed on which to lie. It costs more money to make the animal body comfortable with feed than by shelter.

### CO-OPERATION FOR EGG PRODUCERS

A co-operative plan to reduce the enormous waste now caused by the careless marketing of eggs is outlined by the U. S. Department of Agriculture. It is estimated that under the present haphazard methods of gathering and marketing eggs nearly 8 per cent of the country's output is a total loss. Since the annual production of poultry and eggs in the United States is valued at more than \$600,000,000—a sum equal to the value of the hay or wheat crop—the importance of reducing this loss is obvious.

The individual farmer too often regards his eggs as a mere by-product to which it is hardly worth his while to devote himself seriously; in consequence he is inclined both to neglect his poultry and to gather his eggs whenever he happens to have a

spare moment or two. In consequence the output of his poultry yard is not only small to begin with, but a large proportion of it has begun to spoil before it reaches the hands of the country merchants. They usually buy the eggs on "case count," paying the same price for good, bad, and indifferent. The large markets, however, do not pay the same price and reject many altogether; in consequence the price per egg to the farmer is made sufficiently low to provide a safe margin and to cover the loss on eggs of poor quality.

These conditions have been so firmly established by long usage that the individual can do little to alter them unaided. Community co-operation, however, can quickly raise the standard of the eggs shipped from any one neighborhood, and with the standard the price. The fancy trade is quite willing to pay more for a guaranteed article and the extra cost of producing the guaranteed article is more in pains than in cash.

The plan outlined in the bulletin already mentioned calls for the organization of a community egg circle which should include as soon as possible enough members to warrant the employment of a manager. Each member agrees to gather his eggs daily and in hot weather twice a day, to keep them in a cold place, and to deliver none that is more than seven days old. No eggs are to be washed and the male bird is to be kept away from the flock except during the mating season.

The manager of the circle inspects, grades, and markets as a whole the deliveries the members make to him. Payment is made to the members in proportion to the number of eggs of each grade that they deliver and the prevailing market prices, less their proportion of the necessary expenses. The bulletin also gives suggestions for convenient receipt forms which will enable the members to check up their payments with their deliveries.

Such a system will enable the circle to make arrangements for the delivery of regular supplies to the best and most discriminating class of trade. There is always a demand for guaranteed eggs on the part of clubs, hotels, restaurants, and even well-to-do private families, but the individual farmer rarely has a sufficient output to enable him to make a contract with any of these consumers, and the country merchant has no means to guarantee to the consumer the eggs that he buys from individuals over whom he has no control. Co-operative marketing also enables the eggs to be put up in attractive cartons which can be turned into valuable mediums of advertising and reduces the expense of shipments. The increased returns, furthermore, will encourage the producer to devote more time and care to his stock, better hens will be kept, they will be kept in better condition, and in consequence there will be more eggs as well as better ones to market.

"Smith walked meekly up to the blouse counter of a department store and said to the pretty young lady attendant with a blush:

"I'd like to buy a blouse for my wife, please."

"What bust?" asked the young girl politely.

Smith blushed a second time.

"Why, I didn't hear anything," he said.

## THERE'S MONEY IN IT

### FOR YOU---READ THIS

The raising of Alfalfa Seed has become one of the leading industries of the farmers of this section of the country. It pays big dividends to those who have been raising it.

### HERE IS A START FOR YOU

A farm of 50 acres in a locality where the soil has proven itself to be naturally adapted to the raising of Alfalfa Seed. This can be bought for a whole lot less than the market price of farms in that locality. Near a very good market for Garden truck. Raises good fruit.

Owner has other interests that necessitate the disposal of this.

Prior Water right \$1.00 per year if used.

WRITE TODAY for information regarding this exceptional buy.

**W. C. ALBERTSON**

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Via



Sale Dates:

May 13, 17, 20, 24, 27, 31; June 3, 7, 10, 14, 17, 21, 24, 28; July, 5, 12, 19, 26; August, 2, 9, 16, 23, 30; September 6 and 13.

Limit:

October 31st. 1916

Sale daily May 1 to September 30 inc.

Limit:

October 31, 1916.

Following round trip fares will apply from Salt Lake City or Ogden:

Denver and Colorado Springs.....	\$22.50
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Proportionately low rates from and to many other points.

Following round trip fares apply from Salt Lake City:

Spokane, Portland and other intermediate points .....	\$42.00
San Francisco or Los Angeles direct .....	40.00
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See agents for further details.

**CITY TICKET OFFICE,**

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**Salt Lake City.**



For the Buyer

THE FARMERS' MARKET PLACE

This market place offers our subscribers and readers a very good place to advertise. If you have something to sell or want to buy here is the place to tell it. These advertisements are read because they offer bargains, your bargain should be here. Take advantage of this opportunity today.

For the Seller

Gem Herd of Improved  
Chester White Swine

This Herd Bred, Raised and Sold. Both Boar and Sow Grand Champions of the World's Fair held at Frisco this last year. Both Sire and Dam, is still in the herd. If such breeding interests you, write for illustrated catalogue. Stock of all ages for sale at all times.

Address

GEO. H. LAWSHE

Falls City Idaho

PURE BRED JERSEY BULL CALF  
FOR SALE

5 months old for \$25.00. From the most fashionable blood lines in existence. Or will trade for some Good S. C. White Leghorn hens.

EDWIN BRICKERT

Beaver Utah

HOLSTEIN BULLS FOR SALE

Sons of Wachussetts Creamelle George the 2nd whos daughters have made from 350 to 500 pounds of butter fat a year just with ordinary care. Wachuettts was 2nd prize aged bull at the State Fair last fall and all of his get were first in their class but one. His dam gave 105 pounds of milk in a day that tested better than 4 per cent. No. 1 Iowana George 3rd a fine 18 months old son of Iowana Colanath Alberkerk. A high testing heifer from Iowana Farms, Iowa, her dam has a 19 pound record. This young bull was Junior Champion at the State Fair. The first check for \$200 takes him. No. 2 Wachussetts Beauty a 12 month old son of Maudeline Of Beechwood Beauty with a 23 pound butter fat record, milk test 4.6. She is a full cousin to Colanatha 4ths Johana, \$150 buys this one. Take no chances, get a bull from a proven sire and one that has produced the goods. Offer several others from 6 months to 1 year old from \$75 to \$125 each.

J. W. STUBBS

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Breeders of S. C. White Leghorns and R. I. Red fowls and Airedale Dogs.

UTAH HATCHED WHITE LEGHORN  
BABY CHICKS \$11.00 PER 100

Circulars, order-blanks, etc., upon request. Candee Colony Brooders carried in stock.

GLENWOOD EGG FARM

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40 PER CENT OFF

on eggs for hatching for balance of season and on breeding stock as long as they last.

4 BEST LAYING STRAINS

R. C. Reds and White Wyandottes S. C. Black Minorcas and White Leghorns Stock sold on approval. Infertile eggs replaced free of charge. Now is your chance to get a Bargain. Write

E. C. BLANPIED

Box 60 Milford, Utah

Wanted to hear from owner of good farm for sale. Send description and cash price. R. G. List, Minneapolis, Minn.

ONE ACRE

Good land between 13th and 14th South for quick sales; \$425, \$10 cash, \$10 per month.

9 acres between 13th and 14th South, good for dairy or gardening. Can cut into lots later; only \$400 per acre, \$200 cash, balance easy, or might trade.

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Duroc Jersey pigs for sale \$5.00 each, two months' old. Two old imported boars and three sows to be sold at a sacrifice.

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We ask a fair, legitimate price for our hogs and in turn we guarantee every one that we sell. Your money back if you are not satisfied.

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Virginia Jesse S. Richards Mgr. Idaho  
(The West's best Durocs)

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JERSEYS Richmond, Utah. BERKSHIRES



The blood of champion breeds on Rivals Premeirs Master 139600, the greatest boar in Utah is at the head of this herd of prize winning Berkshires. Ames Rival 24th 153236, a champion and sire of champions is another herd boar. Young pigs for sale at reasonable prices. Pairs not related can be furnished.

CAINE LIVE STOCK CO.

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20 ACRES

farm in sugar beets, close to beet dump, good improvements, the best of soil, water and climate, nearly ideal and the price for this home is \$3500.00. Terms reasonable.

If you want one of the very best 60 acre farms in the valley, with improvements to correspond, a perfect dream, just the one you want, price is right. For prices and terms on variously sized farms in the Great Bear River Valley you must call or write to the

Bear River Valley Real Estate  
and Insurance Agency

Tremonton Utah

FOR SALE

Utah Big Type Poland China Hogs. Fall and Spring Boars, a few gilts. Best blood and breeding, real big type. Write or come and see them.

H. G. JOHNSON

East Garland Utah

The farm hands were taking turns at the pump for their morning wash. All scrubbed off except the new man. "Joe," said the boss, "aren't you going to wash up this morning?"

"Shucks!" was the reply, "It don't make me dirty to sleep."

ADJUSTING THE HARNESS

Collar boils are often caused by improper adjustment of the fastening of the trace chain on the hame. Every hame should have several places for adjustment and the regulation should be made to conform to the slope of the shoulders of the individual horse. Horses with straight shoulders should have traces about midway of the hame while horses with sloping shoulders should have the adjustment about two-fifths of the way up from the bottom.

Adjustment of the backband will in a measure correct any weakness in the formation of the shoulder. The backband can be made not only to carry a part of the weight, thereby adjusting the depth of the plow, but it can be made to adjust the draft to fit the horse's shoulder. The adjustment can be made either by shortening the back band or moving it further back on the horse. The length of the trace should be such as to prevent the horse's legs knocking against the singletree and still have no surplus length.



## Good-by, Guess Work

**T**HE New Sharples "Suction-Feed" is the only cream separator which eliminates guess work from cream production. All other separators have to be turned at exactly the speed indicated on the crank or they will lose from 7 to 13 pounds of butterfat per cow per year. The Purdue Experiment Station and other scientific investigators have proven these figures (see Bulletin No. 116, Vol. 13.)

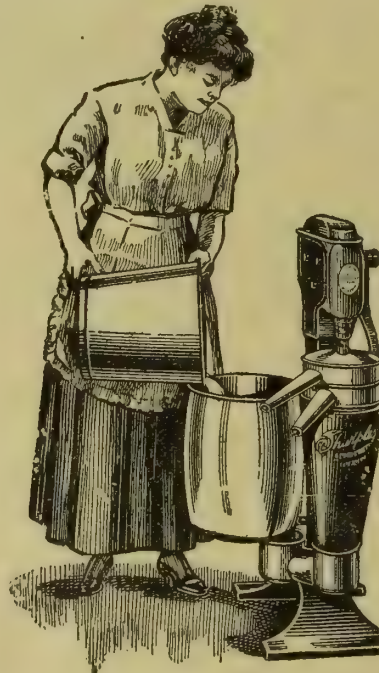
This "guess" speed is used by 19 operators out of 20, because it is impossible to turn the crank at exactly the right speed.—It is much easier to turn it slower—and, whenever you do, you lose cream. Even a speed indicator will help but very little, as you won't and can't watch it every minute.

So we say to you dairymen: Quit guessing about your separator speed and your separator profits. Use the

## SHARPLES SUCTION-FEED CREAM SEPARATOR

and know that you get all the cream all the time.

Whether you turn faster or slower, the bowl of the Suction-Feed drinks in just the right quantity of milk. The feature is entirely automatic; if you are tired, you turn slower (which is easier) and, if in a hurry, you turn faster and finish so much sooner. No matter how you turn, the New Sharples always skims clean.



The Sharples cream is always of even thickness, whether you turn fast or slow. The Supply can is but knee high so you can fill it without any back breaking effort. The three-piece Sharples bowl is lighter and simpler than any other—no discs to wash.

All these money-saving and trouble-preventing features are described in a handsome catalogue; "Velvet" for Dairymen. Send for a copy, now, while you think of it. Address Dept. 104.

## The Sharples Separator Co.

Jobbers for Utah, A. L. Brewer Dairy Supply Co., Ogden, Utah.  
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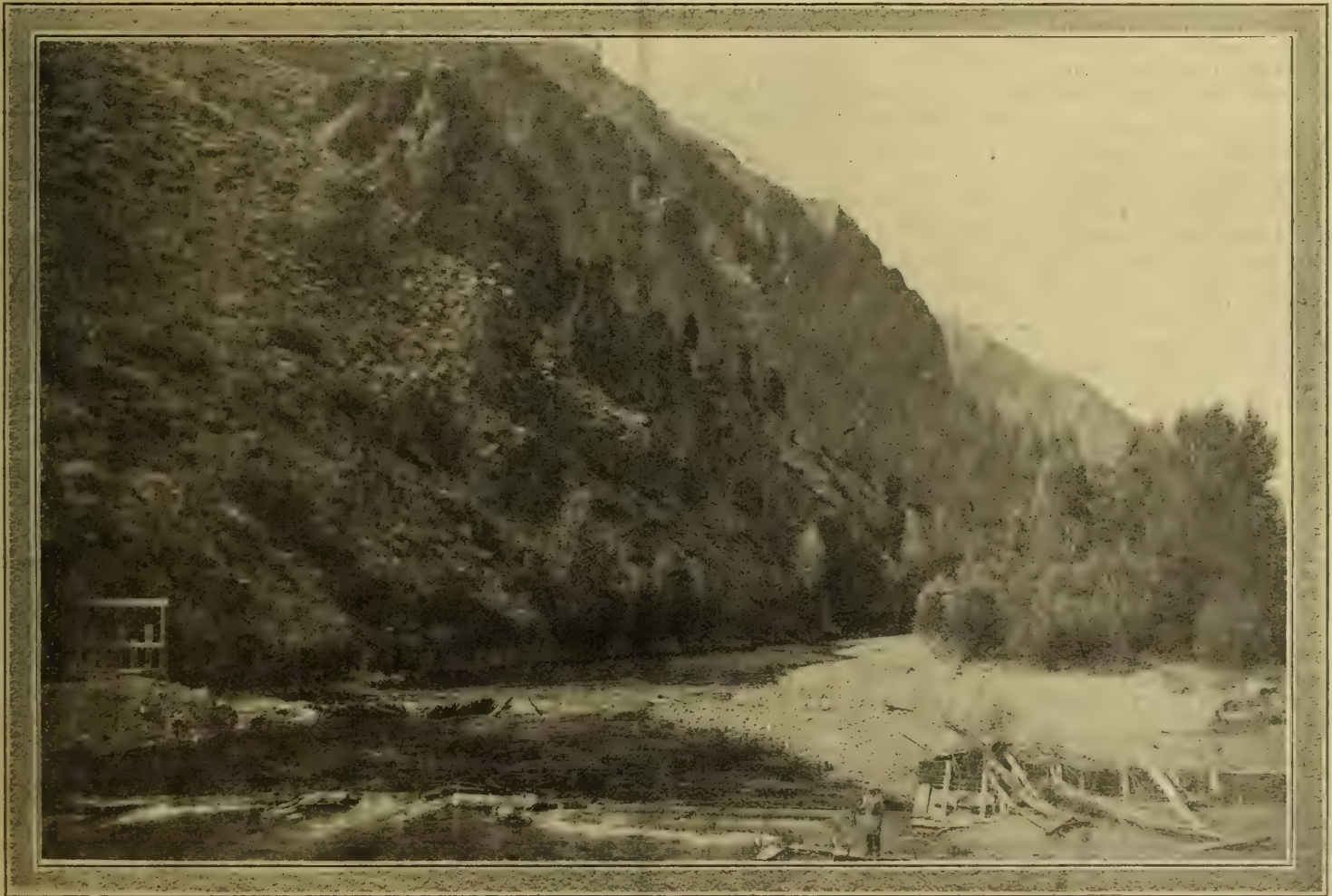
# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region

OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE

VOLUME XII; No. 48      LEHI AND SALT LAKE CITY, UTAH      JULY 1, 1916

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## A Mountain Stream

WE DEPEND UPON SUCH STREAMS TO FURNISH OUR FARMS WITH IRRIGATION WATER.



## Seed and Seeding

Prof. J. C. Hogenson.

### Agricultural Lesson.

Seed wheat is affected greatly by its environment. If wheat is grown on dry farms, it gradually adapts itself to dry conditions. It is folly, therefore, to obtain seed for dry farming from people who have grown their wheat under irrigation. A satisfactory variety should be chosen, and, by constantly selecting the best each year, its vitality can be maintained. In time the farmer who does this will have a ready market for his crop because of its quality and uniformity. Farmers should obtain seed from dry farms where the variety they desire is grown, and by careful yearly selection develop a wheat suited particularly to their conditions. Care should be taken at the beginning to obtain good seed, which is known to have a record of large yields per acre. This wheat should then be retained year after year. Changing seed has its dangers, as it may not be suited to your conditions and to the environment into which you put it.

After a number of years of experimenting on dry farms, the following fall wheats have proven valuable—Turkey Red, Koffod, Gold Coin, Winter LaSalle, Odessa, Red Chaff, Blue Stem.

Dry farmers used to sow from 1½ to 2 bushels per acre, but experience has shown that from two to three pecks per acre gives better results than where more seed is used. After summer fallow there is usually sufficient moisture to germinate properly this amount of seed, which will furnish a sufficient number of plants to stool out for a good stand. Where wheat is grown on the same land for two or more years, the moisture in the soil will be less and the prospects of all the seed germinating lessened, more seed should therefore be used, if the soil be loose and open, or the season far advanced before seeding more seed should be used.

On the Juab County Dry Farm one year on the plat where two pecks were sown to the acre, stoolings of 120 straws were counted. Counting 20 kernels to the straw, this will be an increase of 2400 fold. The stooling grew less in the proportion as the amount of seed per acre was increased. In fact, the two and three peck seedings gave as much and a little more wheat per acre than did the more thick seedings. The wheat, too, is plumper and better matured.

### Time of Seeding

Very little of the wheat now grown on dry land is spring sown. When the land has been summer fallowed the seed may be sown from August to the middle of November. If the wheat sown in August is supplied with sufficient moisture to sprout, and to keep it alive until the fall rains begin, it will undoubtedly produce the best crop. If, however, there is not sufficient moisture to keep the early sown plant growing, then the later sown crop will be the best. Taken year after year, the safest plan may be to sow the seed in September or October. If the land has been properly cared for, however, there ought to be sufficient moisture in the soil to insure germination, and to keep the plant growing. If there is no

moisture at all within reach of the seed no harm comes to it from lying in the ground until the fall rains come.

A few dry farmers in this state sow their grain in the spring on account of the danger from winter killing. It has been the experience of the Experiment Station that in most parts of the state there is but little danger from this source, especially where some snow falls for the protection of the young plants. Fall sowing has the great advantage that the crop gets the full benefit of the fall and winter moisture and is in the soil ready to be benefitted by the first warm rays of the spring sun. Spring grain usually misses a great deal of this. On our experimental farms, fall grain has nearly always doubled the spring grain in yield.

### Method of Seeding

Very few farmers now sow their grain broadcast, as it is not a paying business. Broadcasting is not as good a method as the drill for the following reasons. 1st, more seed is required per acre; 2nd, the seed is not put in at a uniform depth, some will be in too deep while some will remain on the surface. 3rd, it requires more work, hence is more expensive. 4th, seed is not evenly distributed on the ground. 5th, A poorer yield is nearly always secured. The press drill has come to stay, and is a very useful and necessary implement for the dry farmer. It presses the loose soil firmly around the seed, causing quicker germination and results in preventing the wind from carrying the soil and seed away.

### Depth of Seeding

The depth of seeding depends to a large extent upon the amount of moisture in the soil and the character of the soil, if the surface is moist an inch or an inch and one-half will be sufficient depth, while if the soil is dry the seed may be put in from four to five inches. The young plants will readily push their way through this depth of loose soil. The ordinary depth to which seed is planted is from two to three inches. On the experimental farms, deep seeding has given better results than shallow seeding.

### Rotation

The question of rotation is not a serious question for the dry farmer because of the fact that he must summer fallow to conserve moisture. It yet ought to be of sufficient importance to demand some attention. Any crop grown continuously upon the same land has a tendency to deteriorate and to exhaust the soil of the particular plant food which that crop demands. Wheat has been grown for 50 years upon the same land but it has been done only by special effort and culture. Alfalfa will grow upon the same land for a number of years but generally after eight or ten years it begins to fail. Realizing this, some sort of a long rotation ought to be followed on dry farms. The following might be offered, cereals six years, corn or potatoes two years, alfalfa or Brome grass six years. It is a rather long rotation because we have to summer fallow every other year for the cereals.

## To Play Piano Well

One should have the benefit of the best rudimentary instruction in the beginning. This can only be done by selecting the most competent instructor.

### Prof. J. J. McClellan's Piano Course

Written by this eminent instructor and performer for the particular instruction of those who cannot come to him in person—gives you the benefit of his teaching in a way that enables you to become proficient in a short time.

### This Is The Course---

we are offering to all our students of piano. It has been very successful and is well liked by all who are studying it.

WE ALSO HAVE COURSES IN VIOLIN; VOICE, ORGAN, DRAMATIC ART and BAND INSTRUCTION.

All of these courses are compiled by the best talent that can be secured and are written in that understandable form that allows you to grasp the instruction easily.

### SEND IN THE COUPON—TODAY

See how simple it is to study your chosen subject with the instruction coming from the best talent in this part of the country. You will be under no obligation to us and we will be very glad to explain.

## Utah Conservatory of Music

Templeton Building

Salt Lake City, Utah

### MAIL THIS COUPON—TODAY

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Templeton Building, Salt Lake City, Utah.

Gentlemen.—Send free—information regarding the course checked. It is understood that I am not obligating myself in any way.

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Piano Organ Voice Violin Band Instruction Dramatic Art



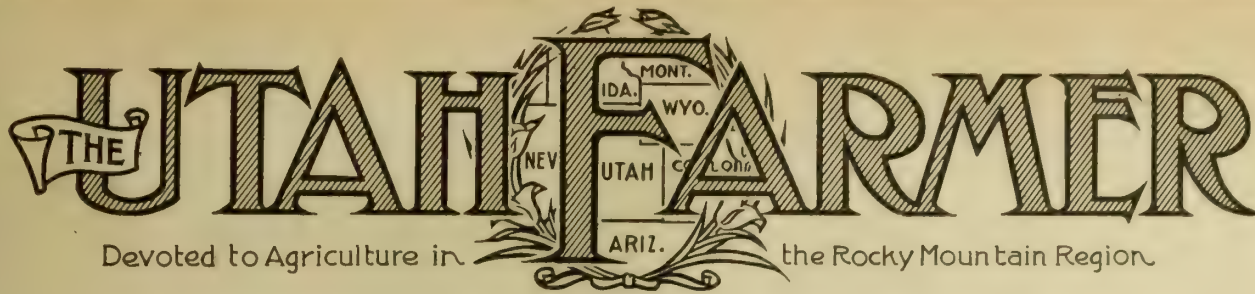
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VOLUME XII.

LEHI, UTAH, SATURDAY, JULY 1, 1916

No. 48

## Shall We Vote For the Tax Amendment Next November

Francis W. Kirkham, Salt Lake City, Utah.

The following is the first of a series of articles on taxation by Mr. Kirkham. He was a member of the Board of Commissioners on Revenue and Taxation appointed by Governor Wm. Spry, pursuant to a law passed at the Utah Legislature in 1911, and who made their report to the Legislature in 1913—Editor.)

The subject of taxation to the average taxpayer is a mystery. He knows that annually he must pay taxes. Whether his neighbor pays more than he, and whether the rich man or the large corporation is more heavily taxed than the farmer, he cannot say, but the impression is that his burden is the greatest. Any attempt at new legislation in taxation must meet the immediate impression of the taxpayer that its only object is to increase taxes, and especially the taxes of the small land owner and the man who is paying for his home.

In the fall of 1913 certain amendments to the constitution of the State were voted upon and defeated by the people. Under the constitution of the State of Utah no reductions can be made in the taxes to widows, to the owner of a small home—to anyone—except in the sum of ten dollars. It is universally conceded that the man who consumes practically all he earns is taxed more than the man who can save, for the man who pays the taxes on the merchandise which he imports, or on the goods which he manufactures, or on the minerals which he digs from the earth, adds the tax to the price of the article purchased or manufactured, or dug from the earth and passes it onto the man who is the final consumer.

It is, therefore universally conceded by students of taxation that certain exemptions should be made to the man who consumes practically all he produces. The household effects of the small home owner should be exempt from taxation; widows and those who are more or less dependent should have exemption from taxation; the farmers' implements on his farm should not be taxed; but without an amendment to the Constitution of the State of Utah there is no possible relief from the inequitable system of our present laws of taxation which require that every man must pay in proportion to his property whether great or small.

Had the people of the State of Utah known that the object of one of the amendments of the constitution which they voted against was to grant such exemptions as above outlined the result would have been different. One

month before this amendment was voted upon, all the Salt Lake papers, including other prominent papers of the state advised their readers to vote against the amendments for they had but one purpose, namely to raise the taxes of the people, whereas the object was to equalize the taxes, to place the burden where it belonged and where it could be borne with least hurt.

A second object of the amendments voted upon was as follows:—Under the constitution of the State of Utah all property in the state must be assessed at its full cash value, and must be taxed at the same rate. For example, a farmers' land, his cattle, his machinery, the merchants' merchandise, his store and fixtures; the bankers' and money loaners' cash either in the bank or in the form of notes secured by collateral the net process of mines must all pay the same rate of taxes according to the law. As a matter of fact and practice, the small landowner and the owner of the small home who has all his property in sight does not escape the taxation of a single acre of land, or a single cow or calf, but the man who has money in the bank, who has large holdings in notes is not taxed except for the visible articles at his home. We found in Utah County only one man who had money that he was paying taxes upon, and he lived in the city of Lehi and owned one hundred dollars. In Salt Lake County there were two men who had money in the bank, and of the many money loaners in the state of Utah not a single man was taxed on his notes.

It is a well known fact that it is impossible to tax such intangible property consisting of land merchandise, cattle, etc. This difficulty has been met by taxing intangible assets at about one-fourth the rate of the tangible property. Money in savings banks in the state of Utah receive only 4 per cent, and as property in the state on an average is taxed about 3½ per cent on a 1-3 valuation it is evident that had the assessors of the state of Utah taxed such property as they had taken solemn oath that they would namely at its full cash value there would have been no money in the savings banks of the state.

The object of the second amendment proposed was to so amend the constitution that a law could be passed making it possible to tax different classes of property at different rates in order that the rich man who had large intangible assets could at least pay a portion of the burden of tax-  
(Continued on page 15)

## Dry-Farming In Southern Washington County

Report of J. W. Paxman, Extension Specialist in Dry-Farming for the Utah Agricultural College.

### Lower Kolob, Smith's and Big Plains District.

There are but few people in the state acquainted with Dry-Farming conditions and possibilities adjoining "Our Dixie Land," for the impression is that the country is made up of a conglomerate mass of black lava rock, impassable gulleys, precipitous cliffs, mountain gorges, treacherous streams, uninviting sands and bad roads, with garden spots here and there just as an indication that the white man had gone there to exist.

In the southeastern part of the county there have been revealed to light and now occupied—nearly all by "Dixie" people—about 30,000 acres on the mesas which is capable of bringing dependable crops under dry-land agriculture.

### Lower Kolob District

This is a small area of about 5,000 acres of light, rich, mountain loam, situated about 12 miles north and slightly east of Virgin City, on rather a high plateau at the base of the Kolob mountain at an elevation of about 4,500 feet. Here the snows fall deeply in the winter and the rains of spring are rather copious, affording ample moisture for the crops. The soil is adapted for all small seeds, garden truck yielding quite prolific crops. All kinds of vegetables, including water melons, can be produced in excellent quality. Potatoes and corn give heavy yields and on some of the heavier soils the grain crops prove satisfactory.

Many varieties of weeds readily find a home here and are to be persistently fought if they are to be kept under subjugation. The native vegetation is a rank growth of sage, bunch grass and oak brush.

Only a small portion is yet under cultivation, and that portion poorly managed owing to the occupants being poorly equipped and with limited financial resources. It is located quite a distance from market and requires rather an expensive and hazardous haul to cash the products. The land owners should live here the year round and convert all the heavy products into meats of good quality.

### Smith's District

This comprises about 8,000 to 10,000 acres on a mesa lower and next to Kolob and East of Toquerville and is a heavy soil, with more or less sand on the surface. The subsoil is rather a heavy clay, capable of retaining moisture in liberal quantities.

This too, is covered with thrifty sage and native grasses. It has been

recently entered and some of it fenced. Very little is under cultivation, but some day will respond with good crops of corn and wheat. The land is particularly adapted for wheat and on some tracts alfalfa can be grown.

### The Big Plains District

The precipitation is said to be near 15 inches.

This is rather level and on the mesa or bench southeast of Hurricane and south of Grafton and Rockville, covering an area of about 1 to 3 miles wide, and 8 miles long, extending south to the old ranch of Caanan Springs, and into Short Creek, comprising 15,000 acres of fertile lands. The lands are all occupied and some of them have been raising crops for three or four years.

The lands in the north give evidence of strength and of being adapted to the grains on account of a heavy clay subsoil. The soils in the south are more sandy and better adapted to corn and Sudan grass, also potatoes. All the lands readily respond to cultural methods, and if given good treatment will give profitable crops. They are essentially sage brush and cactus lands with sod of buffalo grass, some of them difficult of clearing. The plowing is heavy and difficult if attempted when the ground is dry, although a good disc plow will handle them at almost any time of the year.

The precipitation is judged to be near 15 inches by comparing with records at Springdale and Hurricane. This is a promising section, and much genuine interest and some considerable activity is manifest, there being upward of 2,000 acres under the plow, yields of near 25 bushels of wheat and 35 bushels of corn are reported during favorable years.

The growing seasons are long and "early planting and early maturity" is the system that will make for the best success.

Up-to-date the methods pursued are poor because of an anxiety for quick returns. The farmers are people of limited means and inadequate equipment, and are compelled to seek work off the farm to make ends meet, during the early development period. Some, however, are "getting on their feet" and promise better practices in the future.

### Water Facilities

In this district the farmers have co-operated and piped a stream of pure spring water for a distance of

(Continued on page 14)



## DAIRYING

**CO-OPERATIVE CREAMERIES**  
J. E. Dorman in Charge of Western Dairy Investigation.

### Conditions Necessary for Success

In order to make a co-operative creamery a success one of the requirements is that there must be sufficient amount of cream produced in the immediate locality to warrant the operating of a plant. The experience in localities where co-operative creameries have been established in the West has shown that from 400 to 500 cows are necessary in order to start the creamery on a profitable basis. In this connection, however, the grade of cows should also be taken into account. In some cases where beef or range cattle are used for milk production a greater number of cows are needed than where cows of the dairy type have been kept and dairy herd improvement has been going on for some time.

Another essential condition is that there is a co-operative spirit in the locality and that the farmers are sufficiently interested in the proposition to work up the organization among themselves. Many failures have been recorded where a professional promotor or some business men's organization has tried to force the organization upon the farmers. The work of gathering stock subscriptions and making a canvass of the number of cows tributary to the proposed creamery should be done by a committee of farmers. In doing this the territory should be apportioned, each member of the committee being given a definite district in which to call upon all the farmers. This committee work will make the farmers familiar with the conditions and feelings as they exist. This helps to prevent misunderstandings that might arise later to the detriment of the co-operative movement.

Another factor which affects the advisability of starting a co-operative creamery in a given locality is the question of markets. Where there is a local market on which the product of the creamery can be sold to good advantage, the co-operative creamery has better assurance of success as a rule than where the output of the plant is sent out on the general market. This, however, is not necessarily true, provided the co-operative creamery makes some provision by which its butter is sold on the general mar-

ket under its own brand rather than to allow some selling agency or other creamery to place its brand on the co-operative creamery product.

### Advantages

The advantages of the co-operative creamery are many, but among the leading ones the following might be mentioned: (1) Better quality of butter can be made in a local creamery where the cream is not shipped long distances. (2) The producer is encouraged by receiving for his butterfat what it will bring in the form of butter minus the expense of manufacture. (3) The producers takes more interest in dairying where there is a co-operative creamery than where none exists, thus increasing the dairy business and raising the standard of the community.

### Difficulties.

Some of the difficulties of the co-operative creamery are (1) the marketing of the product, (2) competition in buying cream, and (3) cost of manufacture.

The difficulties of marketing the product of the co-operative creamery are probably no worse than those confronting the individual local creamery, and where an effort is made to get on to the proper market the co-operative creamery can compete successfully with the city creamery on the city market. The main difficulty in the West thus far has been that the local creameries, instead of building up a trade of their own in the city have asked the city creameries with whom they are competing in cream buying, to market their butter for them. So long as this condition exists the co-operative creamery, will, of course, have difficulties in marketing its surplus product. On the other hand, the fact that a better quality of butter can be made in the local creamery makes much easier the marketing of co-operative creamery butter than the marketing of centralizer butter under the same conditions.

At times co-operative creameries have difficulties with their stock holders in persuading them to patronize their own creamery in the selling of cream, rather than to ship to some outside creamery which might, for a short time, offer a higher price for butterfat. This, of course, is a short-sighted way for the stock holder of the co-operative creamery to treat the local concern, as the added price which may be offered him for a short time by another concern is made possible only because of the fact that the co-operative creamery exists in that locality. Unless the co-operative creamery is patronized it stands to reason that it must go out of business.

There is probably no question but that the cost of manufacture in the small co-operative creamery is greater per pound of butter than is the cost in the larger plant. The expense, however, in either case depends more upon the efficiency of the manager and the buttermaker than it does upon whether it is a co-operative or centralizer plant.

### Method of Paying for Butterfat.

The management of the co-operative creamery is a very important factor in its success. Perhaps the most important factor in the management is the method of paying for the butter-



## You need a new DE LAVAL SEPARATOR NOW

### 1<sup>st</sup> If you are still using some gravity or setting process of creaming—

BECAUSE YOUR WASTE IS greatest and quality of product poorest in mid-summer when the milk supply is heaviest. BECAUSE TIME IS OF GREAT-est value on the farm at this season and the time and labor saving of the good separator counts for most.

BECAUSE THE SKIM-MILK IS poorest without a separator in hot weather and often more harmful than helpful to calves. BECAUSE THE WORK OF AN improved De Laval Cream Separator is as perfect and its product as superior with one kind of weather as with another.

### 2<sup>nd</sup> If you have a very old De Laval or an inferior separator of any kind—

BECAUSE THE LOSSES OF the poor separator from incomplete skimming and the tainted product of the hard-to-clean and insanitary separator are greatest at this season.

more easily handled and cared for than any other, and you cannot afford to waste time these busy days "fussing" with a machine that ought to have been thrown on the junk-pile long ago.

BECAUSE OF THE GREAT economy of time at this season in having a separator of ample capacity to do the work so much more quickly.

BECAUSE THE DE LAVAL separator of to-day is just as superior to other separators as the best of other separators to gravity setting, and every feature of De Laval superiority counts for most during the hot summer months.

BECAUSE AN IMPROVED DE Laval is so much simpler and

These are all facts every De Laval local agent is glad of the opportunity to prove to any prospective buyer. If you don't know the nearest De Laval agency simply write the nearest main office, as below.

### THE DE LAVAL SEPARATOR CO.

165 Broadway, New York 29 E. Madison St., Chicago  
50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER

Uncle Sam will carry  
your money in the  
mails to and from  
this old bank.

4 per cent paid on savings

**Walker Brothers  
Bankers**

Founded 1859

Resources over \$6,500,000.

SALT LAKE CITY



fat. Several systems have been followed in this respect. In some cases, no dividends are paid on the subscribed stock but all of the money received for butter, after the running expenses have been deducted, is divided pro rata per pound of butterfat to the cream patrons. Another system is to pay a certain percent of dividend upon the stock, this dividend being taken out each month and counted in with the expenses for the month. After deducting the expense and the dividend, the money is divided pro rata per pound of butterfat to the cream patrons. Still another system which is followed in some instances is to pay a price for butterfat based on some standard market and at the end of the year divide the profits among the stockholders as dividends.

The first above mentioned method of paying for butter fat is probably the most satisfactory one, as the cream producer receives all that his butterfat brings on the market, minus only the actual cost of manufacture. This, however, is hardly fair to the producer who subscribes stock to support the co-operative creamery and has only a small amount of cream to sell, as he gets very little dividend from his investment in this way.

The second method mentioned is Write us

## If you want money, drop us a line.

We loan on first mortgages on Utah farms or Salt Lake City real estate at reasonable rates.

Prompt action and fair treatment if you do business with us.

**Palmer Bond &  
Mortgage Co.**

WALKER BANK BUILDING  
SALT LAKE CITY



## Garmesa Farms

Use a Pure Bred  
Holstein Friesian Bull  
from an Advanced Registry Dam.  
He will Increase the Production  
of your Herd.

Fruita, Colo.



## RELIABLE FARM BARGAINS

190 acres in Cache valley. Water right for 50 acres. 40-acres of pasture balance all first-class dry-farm land. Short distance from railroad station and schools. Price \$30 per acre. Will consider exchange on this place. This is one of the greatest buys that ever passed through our office.

58 acres near Tremonton, Utah. Good house, barns, other outbuildings, horses, machinery, beautiful trees, water right from Bear river canal, for the extremely low price of \$130 per acre, including everything. Easy terms, with small payment down.

59 acres at Farmington, Utah. 8-room brick house, water piped into the house. Irrigation water for the farm. Good family orchard, large barns and outbuildings. On the main county road. \$11 000. Will consider exchange.

100 acres belonging to the Utah-Idaho Sugar company, near Elwood, for sale at \$115 per acre. 10 years to pay at 10 per cent interest. This property is all plowed and leveled, ditches made, and fenced.

We have several other beautiful farms for sale in the Bear River valley where the land will pay for itself.

We exchange farms for city homes.

KIMBALL & RICHARDS  
"Land Merchants"

56 and 58 So. Main St.  
Salt Lake City Utah.

Phone-Wasatch 963.

## Two Farms For Sale

Situated about 1½ miles east of Springville.

1st. Ostler Farm. Twenty-six and one-fourth acres all under good fence, orchard and farm land. Five room brick house, brick granary and cement cellar. A good spring and flood water right from Hobbie Creek.

2nd. Konold Farm. 93.9 acres—about 50 acres under cultivation balance pasture. About 9 acres orchard, 10 room frame house large barn, stable, sheds, chicken house, pig pen and some farm implements. Water piped in house and corral. Farm has flood water right from Hobbie Creek.

These farms are now leased until December 31, 1916.

Sealed bids will be received until 5 P. M. July 14, 1916.

All bids must be accompanied by certified check of 10 per cent of bid balance to be paid on or before January 15, 1917. Checks will be returned with all rejected bids.

The City Council reserves the right to reject any or all bids.

For further particulars inquire of J. L. WHITING, City Recorder  
Springville Utah

## STARS MAKE DOLLARS

If you're a man of energy and business ability, here's an opening worth consideration. There is a great demand for drilled water wells, and there's large sure profits to the man with a

## STAR DRILLING MACHINE

Portable—Steam or Gasol ne

Best by test. Low in price, high in practical worth. You can make it pay for itself and earn dividends all the time. Look into this! Sold on payment plan if desired.

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probably more nearly fair to the stockholder and cream patron than the former, providing the dividend is not too large. The dividend on the stock should not exceed that of the ordinary interest rate on money.

The third method of paying for butterfat above mentioned is rather treacherous in that, unless very carefully checked up, the creamery is liable to have financial difficulties at the end of the year, rather than to have dividends to pay to the stock holder. Then also it does not give the producer the full benefit of the co-operative organization in that the stock holder, who in many instances is not a heavy cream producer, reaps the profits on the basis of his investment rather than on the amount of cream that he delivers to the creamery.

## Management.

The management of the co-operative creamery should by all means be in the hands of a man who has had experience in buttermaking and who has taken a dairy course at one of our agricultural colleges. The practical man who has no scientific training is far too common in our western creameries. His work is mechanical, and when problems arise he does not understand the fundamental principles involved in buttermaking and, consequently, is unable to solve the problems which a man of equal intelligence with the added college training could solve. On the other hand, the dairy student from the college should have some practical training as helper in a creamery before taking charge of a plant, unless it be that he has had an opportunity while at the dairy school to secure a large amount of practice along with his class work in dairying.

## Place on Irrigation Projects.

Some of our irrigation projects offer unusually favorable conditions for the successful operation of a co-operative creamery. Many of these projects are comparatively small, the farmers neighborly, and an excellent co-operative spirit exists. A successful co-operative creamery can do much in the development of agriculture on the irrigation projects.

## SELECTING DAIRY BULLS

Dr. W. E. Carroll.

Since the dawn of genuine interest in dairying the matter of how to judge the value of a bull has been one of the large questions presented for solution. Each breeder had met this problem sooner or later and each has solved it by one of three methods: the bull has been selected because of individual merit; because of his ancestry; or because of his get. In the past the first two—individuality and pedigree—have been the chief methods of selection. In fact, with young animals these are the only possible methods.

## Methods of Selecting Dairy Bulls.

Individuality—In so far as type and the capacity to get high producing offspring are correlated, it is possible to select bulls by individuality. Most authorities agree that either we do not know this type as yet, or there is little positive correlation between the two.

Pedigree—Selection of pedigree is based upon the thought that high milk production or the power to beget high milk production is rather regularly transmitted from parent to offspring. This, as is known, is far from a dependable occurrence.

## Let Us "Loudenize" Your Barn



Your barn is no better than its equipment.

It may have cost you five hundred dollars or five thousand—if it is comfortable, convenient and economical, it's a success; if it isn't it's a failure.

Louden barn equipment meets the demand for more sanitary conditions in the barn. It enables the cows to do their best as producers. It eliminates the drudgery that makes barn work unpleasant and unprofitable. It is

## SIMPLE—SOLID—SANITARY

There are no "ginger-bread" effects—just clean-cut simplicity that appeals to good taste and modest means alike.

Your barn is your workshop; make it modern. We'll be glad to show you any of the following Loudon products, and to quote you attractive prices.

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Frequently, always, in fact, where possible, a combination of the two methods mentioned is employed. That is, a bull is selected because he has the desired type and comes from a high producing family.

Even this combination of methods is far from adequate, as is evidenced by the numerous disappointments which have followed selections based upon it.

Performance—The advice to dairymen in later times has been to get a tested bull—one that has actually produced daughters of merit. This, of course, is the real test after all, for a bull is valuable in proportion to the average production of his daughters.

This method is not generally applicable, because the bulls must be tested in some herd. Another disadvantage is the time required to get an actual measure of the productivity of the female offspring of any one bull, but where at all possible a tested bull should be used. As between a young untried bull of ever such good individuality and breeding, and an older one which has proved his value as a sire of good producers, breed to the tried bull every time.

## THE STAR BOARDER.

J. H. Campbell, County Agent—  
Montana.

The farmer arose and jumped for his clothes

As the clock struck half past four.

He kindled the fire, then yelled for "Maria"

As he dived through the kitchen door.

With milk pail in hand; now you

understand

What this "hustler" was trying to do, Crowd two days in one, between sun and sun

In the way that his father used to.

His father no doubt knew what he was about

And the way he farmed then was the best

But I give you my word, the old gent never heard

Of cash saving Babcock test.

With this tester and scale you can tell without fail

What each cow for her care does repay,

And weed out the one you are milking for "fun" (?)

And wasting your time on each day.

She may look nice and slick; stand still and not kick

Be the easiest milker you've got, And yet be the beast that's returning the least

Of all the cows in the lot.

Then sell her for beef, it will be a relief

To know her "free board" days are over.

And with less cows to keep, there'll be more time for sleep

And still the cash profits be more.

The truth of this song is revealed right along

In reports from each cow testing "ring,"

So let's organize all those who are wise

And share in the profits 'twill bring.





Combined with the  
Deseret Farmer and Rocky Mountain Farmer  
Established - - - - - 1904

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Lehi, Utah Kirkham Building.  
Our office at Salt Lake City, Utah,  
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**Change in Address**—When ordering a change in the address, subscribers should be sure to give their former as well as their present address, otherwise the address cannot be changed. This is a matter of importance to you and to us.

#### OFFICIAL ORGAN

Utah Horticultural Society, Utah State Dairymen's Association, Utah State Bee Keepers' Association, Bear River Valley Farmers' Protective and Commercial Association, Agricultural College Extension Department and Utah State Fair Association, Utah-Idaho Millers' and Grain Dealers' Association, Utah Fruit Growers Association.

#### OUR GUARANTEE

We guarantee every subscriber against loss thru dishonesty or attempted swindle by any advertiser in this publication. We do not attempt, however, to adjust trifling differences between the subscribers and honest responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within thirty days from date of the transaction, and the subscriber must have mentioned Utah Farmer when writing the advertiser.

**Advertising Rates**—The advertising rates will be sent upon application.

Weeds are so unsightly and are injurious to the growing crops. Keep the cultivator going.

Many of us have not yet learned the value of visiting some one else engaged in the same line of work. Take a day off and see if you cannot learn something from their methods.

Are you supplied with plenty of flowers at this season of the year? If you do not have them you are missing one of the pleasures of life.

#### MORE ABOUT THE PROMOTER

Several comments have been made upon the editorial which we ran last week, "Promoters again." One instance was related to us of where a promoter went to a town and sold the people machinery for the establishing of a manufacturing plant. Not one of the stockholders was particularly interested in that line, and as a result the machinery has never been unpacked, and it is now two years since it arrived.

Another question asked is: "How long will our leading citizens or influential men allow their names to be used by promoters, so that stock can be sold because they are one of the directors? Now the truth is, in many cases, they have had their stock given to them." We believe the practice is wrong, and that some day this will come back to these men in such a way that they will be sorry they allowed their names to be used. The time is coming when we will only buy stock in organ-

ized companies that have been thoroughly investigated, and there is real merit to the undertaking.

#### LOSS BY GRADE SIRES

Just how much we are losing each year in this state by the use of grade sires has been figured out by some men who are supposed to be in very close touch with the situation. It runs into the thousands of dollars.

Many of our farmers are wasting time, money, feed and labor by this practice of breeding to grade sires. The difference between the service of a pure bred and a grade sire is seldom more than \$10.00 and more often only \$5.00, there is however, a big difference in the animal when it becomes two or three years old. This price may vary from \$25.00 to \$100.00, the cost of feed and care will be practically the same.

More pure bred sires are being used today and the percentage should increase. The new state law goes into operation the first of the year and grade sires will not be allowed to run on our ranges.

It is a poor policy to use grade sires.

#### A SILO IS PROFITABLE

We have been encouraging our readers to build a silo, where they have the cattle to which they can feed the ensilage. In other states where they have had many years of experience with the silo they recommend it. We quote from a recent investigation of the Ohio Experiment Station.

"Practical dairymen who are silo users say that the silo on the farm means a saving of from 8 to 10 cents a pound in the cost of producing butter fat. Beef feeders say that ensilage saves from \$1 to \$1.50 per hundred pounds in producing beef. Feeding experiments bear out these statements. On this basis ensilage under normal conditions is worth \$4 per ton. With an increase of 50 per cent in feed prices it is worth \$6 per ton. Reports from farmers over the state show an average cost of \$2.75 a ton for corn ensilage, including all factors incident to its production. The inadvisability of doing without a silo seems to be more important than the question of whether to build one."

#### SHEDS SAVE MACHINERY

The average life of farm machinery that is allowed to stand in the open to receive both the sunshine and the rain is about five years; while machinery, if properly taken care of, should give reasonable service for three or four times that long.

A shed of sufficient size to care for the machinery will cost but a small percent of what the machinery is worth, and will save the price of the material and the building in a year or two. Some consideration should be given to the building of sheds so as to have the kind that are suited for the machinery that it to be taken care of. Machinery is an important part of the farm equipment, and it is the poorest kind of economy to allow it to remain in the extreme heat of the sun, or to stand the wearing effects of the storms.

With the increasing cost of new machinery, the careless farmer should learn a lesson, and not allow his implements to be half worn out and half rusted out. Put the machinery under cover; oil it, if needed, at the right time, and it will be time and money well spent.

#### DAIRY BUSINESS CHANGING

A dairy expert, a man of wide experience, one who should know because of his personal experience, is responsible for the statement that in one of the greatest dairy sections of Wisconsin the dairymen are buying our alfalfa, paying as much as \$25.00 and \$30.00 a ton for it delivered at their farms, they are feeding it to their cows, making it into butter and cheese and then sending it back to us.

A farm paper published in New York commenting along the same line can see great changes for the future of the dairy business. They suggest that small herds of choice cattle will appear on thousands of fruit and poultry farms, suggesting that in the West and Southwest we can produce feed at a less cost and many advantages are in our favor for the production of milk and butter. "The dairy belt is shifting. It will go to the alfalfa lands," etc. Are we awake to our opportunities? Do these people see farther ahead than we can?

#### THE CHEESE INDUSTRY

We learn with a great deal of interest that a number of cheese factories are being, and have been, established recently. The production of cheese is only another way of finding a market for our great crops of alfalfa and other hay and also our pastures.

When cheese is properly made and under favorable conditions there is a good profit from the milk. Some producers say they get just as good returns from milk in production of cheese as from the making of butter.

There are a number of advantages for the cheese maker or the buttermaker when they live several of miles from the railroad.

Government experts in cheese making have been studying western condition in this regard and some are at this time here to make further study of local condition in this line of dairying.

Every natural condition here is favorable to dairying—why not take advantage of the conditions and make ourselves known for the superior quality of cheese, butter and dairy products.

#### HONEST ADVERTISING GROWING

When any movement is nourished from within and from without it is bound to grow. Honest advertising is being supported by the better class of publishers in weeding out the "fakers" from their columns, and guaranteeing their readers against loss from dishonest advertisers. The government, through the postoffice department, is prosecuting all fraudulent users of the mails. The advertisers themselves are adopting the motto of "Truth in Advertising." A number of the states have passed laws that are very definite in this regard. Massachusetts has just past a law forbidding gross misstatements of value. The advertiser cannot say, "This pair of shoes formerly sold for \$4.00 and it is now offered for \$1.98" unless this fact is actually true; and it also forbids any forms of business falsehoods that might have a tendency to deceive the purchaser.

The ads in any paper should be just as truthful as the reading matter, and the advertisers should be as careful as the editor not to overstate their case.

As a result of this, the advertisements are answered more generally, and the readers buy more confidently from the men whose business announcements appeal to him in a paper that stands for truth in advertising.



## UINTAH BASIN FARM LANDS priced to sell.

Here is a good little home of 40 acres, half set to alfalfa, stone dwelling, place fenced, full water right, price \$1200 mighty cheap place. Write.

**B. L. DART**

Myton

Utah

## WE MAKE

Farm and Ranch Loans in Utah, Idaho, Wyoming, Oregon and Colorado.

**MILLER & VIELE**

803-7 Kearns Bldg.  
Salt Lake City.

## Test Road-Building Rock

Counties or communities intending to build water-bound macadam roads run considerable risk of failure unless they have the rock they are to use tested for hardness, toughness, and binding power. These are the qualities, in the opinion of the engineers of the Office of Public Roads and Rural Engineering, U. S. Department of Agriculture, which experience has shown to be most essential to the endurance of a road. In a recent technical paper designed to assist engineers in making accurate laboratory tests of road material, the road specialists define these qualities as follows:

"Hardness is the property a rock should possess in order to resist successfully the abrasive action of traffic, especially iron-tired vehicles, which tend to grind to dust the individual fragments of rock forming the wearing course of a macadam road.

"Toughness is the property a rock should possess to resist successfully fracture under the impact of traffic.

"Binding power, or cementing value, as it is more frequently called, is the ability which the dust of a rock should possess or develop by contact with water, so as to bind or cement the larger rock fragments together and prevent their displacement under the wearing action of traffic. This property is especially valuable in water-bound macadam construction, since it is depended upon to maintain the integrity of the wearing course as the road surface is worn off by traffic."

The use of rock suited to withstand the wear of traffic is regarded as so important that the U. S. Department of Agriculture offers to test samples of road-building rock for any citizen free of charge, provided the samples are sent prepaid, and are submitted in accordance with definite printed instructions. These instructions will be mailed by the Office of Public Roads and Rural Engineering in that Department to whoever requests a copy. Where a community is considering using a local stone or other stone which has not already proved its durability in highway work. The highway supervisors would do well to secure a laboratory report from the Department. These laboratory tests are conducted with elaborate and rather expensive apparatus and in the case of untried rock are the only practical safeguards against the employment of material that will wear out too quickly to prove a good investment.

Different specimens of rock belonging even to the same family or type may show under test marked differences in these essential qualities. For example, in the abrasion test where broken stone is revolved in cylinders and allowed to grind against itself, the per cent of wear may be as little as 1 or as high as 40 in some cases.

The hardness test is made by cutting out a small core of the rock with a diamond drill and then grinding away this core upon a circular disk with crushed sand as an abrasive. Hardness, or the resistance to this grinding action, it is found, will run from 197 for the hardest varieties of rock down to 0 for very soft materials which are practically useless for heavily travelled roads.

The toughness test is made upon a small core of the rock which is placed in a machine, where a weight is dropped on it from increasing heights, un-

till the specimen is broken. This test is useful in determining the resistance of rock to the impact of horses' hoofs and wheels of vehicles upon the stone forming the wearing course of a macadam road. It is found that the toughness of different rocks varies from as low as 3 to as high as 60 in rare instances.

In water-bound macadam roads the ability which the powder ground by traffic from the larger fragments to of binding the larger fragments together is highly important. To determine this in the laboratory the stone for the test is ground with water in a ball mill, and the dough thus formed is moulded into briquettes. These briquettes when dried and thoroughly set, are put in an impact machine, which delivers repeated blows of measured force on the top of the little cement-like cylinders made from the rock powder. The machine counts the number of blows it makes, and automatically records when the briquette is broken. This test, therefore, gives a preliminary idea of the binding power of the material. The results of this test vary enormously, running from 0 for material which has no binding quality, when mixed with water, to several thousand blows for the very high binding rocks.

There has been a steady advance in the prices of milch cows for several

## Interlocking CEMENT STAVE Silos



### ANDERSON FARM

Lehi, Utah

12x35 foot silo, 100 ton capacity. A. B. Anderson, writes that his silo is a complete success.

Information about concrete on the farm, including details as to Silo building, will be furnished free. Just sign coupon below and mail it to us.

Intermountain Concrete Co.  
OGDEN-UTAH  
Please Send Me Catalogue No.3  
NAME .....  
ADDRESS .....



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VIA LOS ANGELES and rail or steamer  
**\$40.00 TO SAN DIEGO** or SAN FRANCISCO and return  
ON SALE DAILY beginning MAY 1st.  
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OPEN ALL YEAR  
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Salt Lake City, Utah.



## ELI HAY BALERS

makes clean, compact bales of anything balable. Built by pioneers. Highest award at four expositions.

### 40 Styles and Sizes

for every need. Biggest results and profits for users. Write for latest Catalog.

COLLINS PLOW CO.  
2074 Hampshire St., Quincy, Ill.



When you answer the advertisements in this paper tell them you saw it in the Utah Farmer. Always buy advertised goods.

## For silo owners

### Start now to choose your silo filler

Losses were very heavy last fall among farmers who depended upon somebody else's cutter, and couldn't get it when needed the worst. Farmers lost big because their cutters broke down at the critical time. The

## BLIZZARD Ensilage Cutter

is the dependable machine for the farmer—because so simple, safe and easy running. Small engines plenty powerful enough. Unlimited cutting and elevating capacity. Fills the world's largest silos as easily as twenty-footers. Self-feed table saves one man. Repair cost very little. Many still giving good service after ten and fifteen years of use. Talk with us about an ensilage cutter now. Drop in for a catalog, at least.

Intermountain Concrete Co., Ogden, Utah.



years. Therefore the admonition to save the heifer calves is timely.—Farm Journal.



## LIVE STOCK

### HANDLING BROOD SOWS

#### AFTER WEANING PIGS

The management of the brood sow after weaning her spring litter is a matter of considerable importance. There are a number of factors that will cause the summer management to vary. Among the more important factors are: the age and condition of the sow and the number of litters—one or two raised per year.

If it is a mature sow and you plan to raise a fall litter, you probably have fed her well, and if so the sow should begin to gain in flesh when the litter is from eight to ten weeks old and in most cases the sow will come in heat then so you can breed her for early fall pigs. We find at the Experiment Station that if we don't get sows to farrow the last of August or the first of September, we cannot get an early litter the following spring, and the pigs do not get a good start for winter, especially in the higher, wet sections of the state. Brood sows should have a large roomy pasture which will afford plenty of exercise and succulent feed, both of which are indispensable for strong, thrifty litters. In addition to their pasture, their feed should consist of oats, shorts, and barley or wheat and usually some tankage. As to the amount to feed, that will vary with the individual sow, but one should try to feed enough to get her up in good thrifty condition for farrowing. The barley and wheat could well be left out of the ration after the sows get up in flesh since they are mainly fat formers.

On the other hand, if your mature sow is not to raise a fall litter and you intend to breed for spring pigs, turn her out on good pasture and see that she has plenty of fresh water

and shade with a small allowance of barley or oats. Such treatment will build up her constitution and general condition as nothing else will. Continue this method of handling until time to bring her up in condition for another season's breeding. It is true that some breeders carry mature sows through the summer on pasture alone (with water and shade) in very good condition, but most breeders prefer to use a small amount of grain in addition to the pasture.

Young sows will need better feed. Never turn a gilt out with a lot of old sows after raising her first litter. She will fare badly when she should have the best of feed and care to grow her out as she should be. If you allow this gilt to run along thin she will always be undersized and common. Young sows should be liberally fed in addition to good pasture. Use such a grain mixture as was suggested for the mature sow that raises two litters per year and use plenty of it, and remember that you are after bone and muscle, not fat.

The essential thing in the minds of most breeders is that brood sows after weaning have exercise, plenty of pasture, shade, fresh water, and enough concentrated feed, properly balanced. This should mean a strong, healthy, vigorous sow in good breeding condition and insures a healthy, vigorous litter. Brood sows thus handled are more likely to produce large litters of strong, healthy pigs and are certainly more likely to raise a good-sized litter. After all the profitable sow is the one that raises 7 to 10 good strong pigs rather than the one that farrows 12 to 18 and only raises 3 to 5 fair pigs.—C. W. Hickman, Idaho Experiment Station.

### HOGS ON PASTURE

Pork Production Cost Reduced—Supplemental Grain Ration Desirable—Composition of Pasture Forage.

The cost of pork is reduced materially by the use of pasture and forage crops, but it is desirable to feed grain or other concentrated feed in addition. In some sections of the country where pastures are luxuriant, mature hogs are maintained in an apparently satisfactory condition on pasture alone. This practice should not be followed, however, in the case of young, growing pigs, because they will become thin in flesh and stunted if compelled to live on pasture alone.

Hog raises differ widely regarding the quantity of grain that should be fed to hogs while on pasture. Some feeders give them all they will consume. Others feed a ration equal to about 2 to 3 per cent of the live weight of the hog. Still others will allow pigs to run on pasture and feed them a 1 per cent grain ration. There is no fixed rule governing the supplemental grain ration which should be fed in combination with forage. The amount of grain fed depends upon the kind of pasture used, the price of grain and the market.

Pasture forage has a variable composition. Alfalfa, clover, vetch, and peas furnish feed much richer in protein than most other crops. Where hogs are feeding on leguminous pasture they require less concentrated

# SUNRIPE

## Stock Feed

---A well balanced, highly nutritious mixture of grain and grain products.

Better feed than straight grains for horses and other stock.

All dealers.

Manufactured by  
**Utah Cereal Food Co.**

Ogden, Utah



### CATTLE RANCH BARGAIN

200 acres, all watered, free range, good buildings, complete set machinery, only 1 1/2 miles from good town. A bargain for somebody at \$6,000.

**FEDERAL LAND CO.**

Ogden Utah

### A Saddle for \$36 Cash

Our latest "Swell Fork Saddle," 14 inch swell front 28-inch wool lined seat, 3-inch stirrup leathers, 3/4 rig made of best oak leather, guaranteed for ten years; best side control, solid steel fork.



**The Fred Mueller Saddle and Harness Co.**

Dept. A.

1413 Larimer St.  
Denver Colo.

Send your name for our 1915 catalogue now ready.

The Celebrated Mueller Saddle

### EAR PERFECT TAGS



Samples Free

ATTACHED INSTANTANEOUSLY  
Name and Address. Numbered if Desired.  
LEG BANDS for Poultry, Pigeons, Turkeys  
SALT LAKE STAMP CO. Salt Lake, Utah.

### BLACK LEG

LOSSES SURELY PREVENTED  
by CUTTER'S BLACKLEG PILLS

Low-priced, fresh, reliable; preferred by western stockmen, because they protect where other vaccines fail.

Write for booklet and testimonials.

10-dose pkg. Blackleg Pills, \$1.00

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Use any injector, but Cutter's simplest and strongest.

The superiority of Cutter products is due to over 15 years of specializing in VACCINES AND SERUMS.

ONLY. INSIST ON CUTTER'S. If unobtainable, order direct.

The Cutter Laboratory, Berkeley, California

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Prints Made From Only Good Negatives  
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**SHIELDS STATIONERY CO.**  
KODAK HEADQUARTERS

131 MAIN ST. OPPOSITE KEARNS BLDG. SALT LAKE CITY

feed than when grazing upon non-leguminous pasture such as timothy, orchard grass, Bermuda, or bluegrass. In the early stages of growth the cereals may be classed as nitrogenous forages. A farmer may have more hogs than his pasture will accommodate. When this is the case the pasture will last longer if a full grain ration is fed. The more grain a hog consumes, the less forage he will eat.

When grain is high, it is rather expensive to feed a supplemental grain ration. At such times there is a great temptation to place the hogs upon pasture alone. This practice will hardly ever pay, for it generally takes more grain and more time to finish off the hogs than if they had been fed a liberal ration while on pasture.

The amount of grain used will also depend upon the length of time the feeder has in which to fit the hogs for market. Hogs that are marketed from 10 to 12 months old are usually maintained on pasture alone during the growing season. If any grain is given at all it is very light. In this way the greater percentage of growth is made from the cheaply grown forage. Where rapid finishing is desired, the liberal use of grain is important.

Live stock farming is sure farming, provided intelligence is put into the ration. It is because of a "sure thing" that we find live stock men able to have more of the comforts of farm life.



## Day's Work In Haying

In order that haying or any other farm work may be planned in advance it is essential to know what may fairly be expected daily of a workman for each kind of work. It is also necessary to know what may be expected from any implement, from each horse or team, or other source of power.

The Office of Farm Management, United States Department of Agriculture, wrote to 25,000 farmers, asking them to report on the work accomplished by their men, horses, and equipment. In addition, representatives of the department went into the field and timed crews at work. Following are the averages and the adjusted figures for the various haying operations:

MOWING, RAKING, TEDDING, AND COCKING.  
[Net hours in the field; For mowing, 9.52; for raking, 8.44; for tedding, 8.26; and for cocking, 9.12.]

Operation	Most common width of horses	Number of horses	Adjusted acreage per acreage day	Ad-justed
Mowing	5	2	8.85	8.0
Raking	8	1	11.99	10.8
	10	2	17.91	17.0
Tedding	6	1	9.75	8.7
	10	2	15.88	14.3
Cocking (1 man)			6.29	5.7

The adjusted figures are the investigators' computation of a fair average after discounting abnormal performances and taking into account the unusual work done on farms which afford especially good working conditions.

In mowing hay, the 2-horse unit is practically universal. The limit of mechanical efficiency appears to be approached as the sickle reaches 7 feet in width. It appears that a 2-horse

team is about 45 per cent more efficient than 1 horse when used with rakes of the widths reported. The 8-foot width is the most used with 1 horse and the 10-foot width with 2 horses. In tedding with a hay tedder or kicker, 2 horses appear to be 45 per cent more efficient than one.

The hay fork and sling add from 30 to 50 per cent to the efficiency of the crews in this work. It was also found that those who used hay loaders and hauled hay direct from the field can put away about one-third of an acre more daily per man than those who haul it from cocks, other conditions being equal. With hay loaders the operation of bunching and cocking is also eliminated. In hauling hay from cocks to barn 41 per cent of the farmers reporting used 2 men, 40 per cent used 3 men, and 19 per cent used larger crews. Seventy-three per cent used only 2 horses and 19 per cent used 4. Although 3-men crews seemed to be much less efficient from the standpoint of acres cleared in a day than 2 and 4 men crews, nearly as many farmers report 3-men crews as 2-men crews.

HAULING HAY FROM WINDROWS TO BARN WITH A HAY LOADER.  
[Net hours in the field, 9.53.]

Number of men	Number of horses	Unloading by hand.		Unloading with sling or fork.	
		Acreage per day.	Adjusted acreage.	Acreage per day.	Adjusted acreage.
2	2	5.29	4.25	7.66	6.15
	4	6.50	5.20	6.62	7.30
3	2	5.86	5.00	7.84	6.70
	4	7.05	6.00	8.98	7.90
4	4	7.81	7.00	10.16	9.15
	6	7.66	8.00	10.37	10.25

HAULING HAY FROM COCKS TO BARN.  
[Net hours in the field, 9.38.]

Number of men	Number of horses	Unloading by hand.		Unloading with sling or fork.	
		Acreage per day.	Adjusted acreage.	Acreage per day.	Adjusted acreage.
2	2	4.39	3.50	6.14	4.90
	4	5.30	4.30	7.94	6.10
3	2	4.55	3.90	6.44	5.50
	4	6.14	4.75	8.16	6.65
4	4	7.17	6.45	10.14	9.10
	6	9.33	7.25	14.25	10.25
5	4	7.70	7.70	10.70	10.70
	6	9.71	8.66	12.33	11.90
6	4	8.03	8.80	10.52	12.45
	6	9.11	9.85	11.53	13.60
	8	5.00	10.80	11.60	14.80

STACKING IN THE FIELD  
[Net hours in the field, 9.70.]

Number of men	Using sweep rakes.			Without sweep rakes (by hand).		
	Number of horses	Stacked per day.	Adjusted acreage.	Number of horses	Stacked per day.	Adjusted acreage.
		Acres			Acres	
2	2	9.70	6.10	2	4.85	3.90
	4	13.75	9.20	4		5.90
	2	9.77	7.80	2	5.38	5.10
3	4	15.4	10.90	4	8.03	7.15
	6	14.55	13.80			
4	2	11.32	9.40	2	8.30	6.60
	4	15.22	12.20	4	9.52	8.90
	6	18.75	15.00	6	14.06	11.20
5	4	12.80	12.90	2	9.00	7.40
	6	19.70	15.80	4	9.37	9.60
	8	23.50	18.60	6	12.50	11.90
6	6	24.66	18.20	4	7.50	11.20
	8	20.33	30.40	6	12.20	13.00
				8	10.00	14.80

Comparison of the results attained in haying with sweep rakes and with-

**BETTER COOKING**      **A CLEANER KITCHEN**

The oven of the NEW PERFECTION No. 7 can be changed into a fireless cooker instantly by simply pulling a damper.

No coal hod or wood box. All the fuel in this reservoir. The New Perfection is ready at the touch of a match.

**NEW PERFECTION OIL COOK STOVES**

Two million housewives have found the NEW PERFECTION the way to escape coal range drudgery and discomfort. It starts without priming—or smoking. It has no valves to clog up, no tubes to warp, wear out or burn out. In 1, 2, 3 and 4 burner sizes.

**GAS STOVE COMFORT WITH KEROSENE OIL**

**THE CONTINENTAL OIL COMPANY**  
(Incorporated in Colorado)

Denver      Butte      Pueblo      Boise      Albuquerque      Salt Lake City      Cheyenne

**VICO Automobile OIL**

THE most essential thing to promote highest efficiency in any automobile is a thoroughly adapted lubricant—one adapted to the car and the climate. VICO Automobile Oil is made in the west to suit western conditions. Comes in three consistencies—light, medium and heavy. One of VICO'S consistencies will lubricate your car perfectly.

**Utah Oil Refining Co. Refiners Salt Lake**

**"EVERY DROP COUNTS"**

out them shows an advantage in favor of this simple and inexpensive addition to the equipment of about 40 per cent. Much of the cost of raking and cocking is also eliminated. An analysis of the data also shows a decreasing efficiency per man and per horse as the crews become larger. Thirty-two per cent of farmers use a crew of four men, and about equal numbers use three and five men crews, while only 9 per cent undertake this operation with two men. Different size teams up to 6 horses are equally common.

**BALED HAY.**  
[Net hours at work, 10.10.]

Type of baler.	Using horsepower		Using gasoline engine.	
	Number of men.	Baled per day.	Number of men.	Baled per day.
1-horse sweep	2	3.6	3	5.44
	3	7.2	4	6.28
	4	9.1	5	8.29
2-horse sweep	5	12.5	6	10.11
			7	12.09
			8	12.53
			9	16.90
			10	11.90
	6	10.9	11	14.00
	7	15.5		
	8	15.5		

It is always better to look on the bright side of life; you can't see very well in the dark anyway.

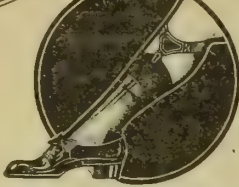
## Do You Crave Sweet Things

If you were asked why you eat sugar, your answer might be: "Because it is sweet and tastes good." Correct! But the more important fact is, the body craves sugar because it needs it and when the body craves something it gives us an appetite for it. So, primarily, that's why we like sugar and things made with sugar, and not because they are sweet.

Candy, cakes and confections made with pure sugar are good for you. The safe, economical sugar for all purposes, and one that sparkles with purity, is "Utah-Idaho." Order it by name.

**UTAH-IDAHO SUGAR**  
ABSOLUTELY PURE





## Boston Garter

*Velvet Grip*

Fits smoothly—does not bind, slip or let go. Will not injure the hose. Light, easy and comfortable. Get the garter that gives the greatest satisfaction—ask for the "Boston."

Lisle 25 cents. Silk 50 cents.

GEORGE FROST COMPANY, MAKERS, BOSTON

## Choctaw Wrapped Tread Tires

### 5000 Miles Guaranteed

Lowest-priced 5,000-mile Guaranteed Tire sold anywhere. Many users get 8,000 to 15,000 miles. Cut your up-keep expense by buying long-wearing Choctaws from us, sole western distributors. ALL FIRST-GRADERS: NO SECONDS.

Size	Plain T.	Non-S.	ALL OTHER SIZES
30x3	\$9.27	\$10.85	
30x3½	11.92	14.04	
32x3½	13.82	16.16	
34x4	20.16	23.58	PROPOR-
36x4½	28.39	33.26	TION

Sent C. O. D. on Approval Expr. or Parcel P. If not right, write and we make 'em right. Careful attention to mail orders. Hundreds of satisfied mail customers.

**Choctaw Tire & Rubber Co.**  
(Net Worth a Quarter Million)  
1561 BROADWAY, DENVER, COLORADO

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ENGINES  
SEPARATORS,  
SPREADERS,TRACTORS

My 250-page free catalog tells you why I sell direct to user, at wholesale prices, these and other implements, built in my own factories at Waterloo, at prices one-third to one-half less than you usually pay for first-class goods. All sizes, styles and prices of separators, engines and spreaders. My Farmobile (tractor) has no equal for simplicity and efficiency. State what you need, 250,000 customers testify to quality of the Galloway line of goods. Write today for your free copy of this wonderful book of bargains for farm and household.

**WM. GALLOWAY, Pres.,**  
**WM. GALLOWAY CO.**  
1577 Galloway Station  
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## DAISY FLY KILLER

placed anywhere, attracts and kills all flies. No st. clean, ornamental, convenient. Lasts all season. Can't spill or upset, will not soil or mark anything. Guaranteed effects on all dealers and prepaid for 29c.

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150 De Kalb Ave.  
Brooklyn, N. Y.

## THE HOME

### MARKETING

By Mrs. Carl McBride, Home Economics Department U. A. C.

The great problem confronting most house wives of the present day is how to make the income go farthest, this could be partially solved by getting better efficiency in the distribution of produce. In many cases we have both demand and supply existing, but many obstructions hinder distribution. The consumer and producer should both be interested in removing these obstructions as it means a higher price for the producer and a lower price for the consumer.

Distribution to be efficient must work quickly and smoothly, there are various ways of securing this aim, an article should pass through as few hands as possible as each person handling must be paid and the consumer must pay for this, one should buy in large quantities whenever possible and co-operative buying should be encouraged, as products can always be purchased more cheaply in large quantities than small, all existing avenues of distribution should be kept open i. e. closed markets open air market, push carts, etc., and new avenues of distributions opened up when ever possible.

Markets may be divided into two classes private and public. Under private would be classed large retail provision houses, provision sections of large department stores, chain stores and small retail stores.

Large retail stores and the provision section of department stores are similar in many ways enjoying the same general advantages as buying in large quantities, having plenty of capital, having agents in different parts of the country looking for bargains, space and ability to demonstrate special features and extensive delivery systems. Their reputation is at stake at all times and so a better quality of goods is insured.

Chain and small retail stores have the advantage of meeting the needs of forgetful and improvident persons who do not buy until the last minute and must in turn pay for the accommodation received. The chain stores have the advantage over the small retail stores of buying in large quantities and then by selling in small make larger profits.

Public markets have been operated with varying success in many cities but are most successful where under municipal supervision. If operated economically and in conjunction with push carts they give the public the best possible opportunity to purchase perishable foodstuffs at the lowest possible prices because of the small amount of labor and capital invested.

The chief obstacles in the stream of distribution are retail dealers and commission men. Railways can be charged with the responsibility only in extreme cases; they much prefer to haul goods in large quantities for it is to their advantage and for years they have been lowering rates on food stuffs in order to get more business and to encourage shipping in large quantities while some roads have gone so far as to established terminal markets.


The retail dealer though not to blame for his existence, is the chief

obstacle, but so long as people are forgetful and negligent there will be a demand for his existence. He charges as a rule conventional prices and we thoughtlessly pay these prices from habit never stopping to consider the real value.

The existence of commission men, speculators and wholesalers is also due to this system or rather lack of system in buying. Both consumer and producer are to blame for this, if producers would organize, middle men would of necessity be eliminated and under this condition the producer would get more and the consumer pay less; on the other hand if consumers would organize they could keep prices down. Under these conditions consumers would be able to have better goods at lower prices and production would be encouraged.

### HOUSEKEEPING A PROFESSION

Happily the days are passing when the feeling prevails that "anyone can keep house." We have been a long time in learning that housekeeping is a profession for which intelligent preparation is demanded. The woman who announces that housekeeping is drudgery and that she keeps as far away from it as possible, thus con-

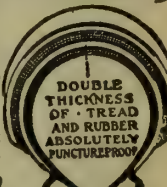


For Greatest Satisfaction Use  
**DOUBLE SERVICE**  
**Automobile Tires**  
Guaranteed 7,000 Miles Service  
**Absolutely Punctureproof**

Double Service Tires are made double the thickness of the best standard make tires.  
This 100% greater wearing surface naturally gives that much more mileage and service. The average of 12 miles of tough fabric and one inch surface tread rubber makes these tires absolutely punctureproof.  
These tires excel all others for use in the country over rough and rugged roads as well as on hard pavements. They are as easy riding and resilient as any other pneumatic tire—the air space and pressure being the same.  
They are the most economical and "care free" tires made and are used where tires must be depended on and tire troubles cannot be tolerated. Many Double Service style tires are in use in the U. S. government and European War service. Our output is limited to a certain amount, but for a short time we offer the following reduced special prices as an introductory offer:

Tires Tubes		Tires Tubes	
30x3 in.	\$8.60 \$2.30	36x4 in.	\$17.45 \$4.65
30x3½ in.	10.85 3.10	36x4½ in.	21.20 5.60
32x3½ in.	12.75 3.20	38x4½ in.	22.50 6.75
33x4 in.	15.75 4.20	37x4½ in.	23.60 6.90
34x4 in.	16.70 4.35	37x5 in.	26.30 6.90

All other sizes not included in above list also furnished. Non-skids at 10% additional.  
Terms: Payment with order at above special prices, a 10% discount allowed on orders for two or more tires. All personal checks must be certified.  
Try these tires now and be convinced of their very high qualities. Sold direct to the consumer only.  
Descriptive folder upon request. Write for it.  
**Double Service Tire & Rubber Co., Akron, O.**  
Dept.




Five-Passenger Touring Car, a beautiful example of the full stream line yacht type.

## Built for Service

Each ELCAR is built for a long life of satisfactory service—built to outlast other cars in its price class, and by a concern which for 43 years has manufactured only quality products. In beauty of design and finish, in mechanical excellence and proven performance, it rivals cars selling at \$1000 and more. Dollar for dollar we believe it represents the best value on the market today.

# ELCAR \$795

If you know automobiles, a glance at these specifications will tell the story of ELCAR extra measure of value.

Silent, powerful, long stroke motor (3½x5)—unit power plant, 3-point suspension—114-in. wheel base—full floating rear axle—Dyneto double unit starting and lighting system—Delco ignition—unsurpassed body designs—roomy seating for every passenger—full Turkish style upholstery—every equipment that goes to make a car at any price complete. Write for catalogue.

**ELKHART CARRIAGE & MOTOR CAR CO.**  
C818 Beardley Ave.,  
Elkhart, Ind.



"Clover Leaf" Type Roadster, seating comfortably four passengers.

When you answer the advertisements in this paper tell them you saw it in the Utah Farmer. Always buy advertised goods.





"I put this up three seasons ago, and see, its just as good as if I sealed it only yesterday. Its because I use

**Parowax**  
Pure Refined Paraffine

in sealing my jellies, jams and fruits. I have discarded those bothersome, unreliable strings and papers. The Parowax way is so much easier and quicker, I am never disappointed by moldy, fermented preserves."

Simply melt the Parowax and pour over jelly glasses. Dip tops of jars in Parowax.

Parowax is guaranteed under the Pure Food Law. Your grocer sells it.

The Continental Oil Company  
(Incorporated in Colorado)  
Denver Pueblo Albuquerque Cheyenne  
Butte Boise Salt Lake City

**RAT CURE**  
TABLETS  
ONLY RATS WILL EAT  
TRY BEFORE YOU PAY  
KILLS 4 RATS FOR 1 CENT  
MARSHALLS MED. CO. BLOOMFIELD N. D. U.S.A.

fesses that she has been unequal to her task. To such it must ever be drudgery, but to her who understands the possibilities and satisfaction in a well ordered house and gives herself to a conscientious and intelligent study of its problems, it gives an insight into and an understanding of people and things; it provides a place for the application of economics, ethics and esthetics; it yields the satisfaction of achievement and the gratitude and love of those who have shared the benefits of such a home.—Isabel Bevier in "The House."

#### SOUR CREAM CAKE

1½ cups sugar.  
1 cup sour cream.  
2½ cups flour.  
3 eggs.  
1 scant teacupful of soda dissolved in sour cream.  
¾ teaspoon salt.  
½ teaspoon lemon and vanilla.  
To eggs well beaten add the sugar, then sour cream and soda, lastly add flour and flavoring. Bake in layers.

#### Filling

1 cup sugar.  
½ cup of milk.  
2½ squares grated unsweetened chocolate.  
2 egg yolks.  
A few drops of almond extract.  
Beat egg yolks slightly and add with the milk to the sugar. Melt the chocolate in a saucepan, stirring constantly and when melted pour in the mixture. Cook, stirring constantly until very thick. Partially cool, flavor, and when almost cold spread on cake.

#### CINNAMON BUNS

Four cups flour, ½ teaspoon salt, 2 teaspoons cream tartar (baking powder may be used instead of tartar and soda). One teaspoon soda sifted together, 2-3 cup lard rubbed in, enough sweet milk for stiff dough, roll very thin, mix 1 teaspoon ground cinnamon, 2-3 cup sugar, spread over dough (currants may be added if desired). Roll in with pin, roll dough, cut ½ inch thick, bake in a quick oven.

#### APPLE PUDDING

Make a rich biscuit dough with 1½ cups flour, ½ teaspoon salt and 2 teaspoons baking powder; add enough sweet cream to make a soft dough; roll out about an inch thick and slice five sour juicy apples and grate nutmeg on apples and roll. Have ready in your pudding dish one cup sugar, ½ cup butter, 1½ cups water; place your roll in that sauce and bake ½ hour. Can be made with other kinds of fruit.

#### CHOCOLATE CAKE

One and one-half cups sugar, ½ cup butter, ½ cup milk in which dissolve ½ teaspoon soda, 3 eggs, 1½ teaspoons baking powder sifted with 2 cups flour, 1 teaspoon vanilla, ½ cup chocolate cooked in ½ cup milk. Cook chocolate before you begin your cake, and put it into the cake the last thing before going into oven. Bake in 2 layers in a moderate hot oven.

#### JELLY CAKE

One-half cup lard, 1 cup sugar, 1 egg, 1 small glass of jelly, 1 cup sour milk, 1 teaspoon soda, a pinch of salt, three cups flour, one-half teaspoon nutmeg, 1 teaspoon cinnamon, mix lard and sugar together well, then add jelly if the jelly is stiff, mix with sugar first then add lard.

### Proper Feeding War Started by Women

NEW YORK, February 27.—Prominent women representing all parts of the country have been appointed members of a special committee to organize the campaign undertaken by the National Housewives' League to build up the health of the nation through proper feeding as its contribution to the preparedness movement, it was announced here tonight. Every woman's organization in the country will be urged to take up the propaganda.

Nutrition Experts  
recommend chocolate as  
one of the most nutritious  
and delicious of foods.  
Health—and economy—  
follow the daily breakfast  
cup of strength-supplying

## GHIRARDELLI'S GROUND CHOCOLATE

In ¼-lb., 1-lb. and 3-lb. hermetically sealed cans. There's a double economy in buying the 3-lb. cans.

D. GHIRARDELLI CO.

Since 1852

San Francisco

OPENED JAN. 1ST, 1913



"The HOTEL that's BEST  
In all the WEST"

WHEN IN LOS ANGELES

STOP at the NEW  
FIRE PROOF

**HOTEL NORTHERN**  
EUROPEAN  
200 OUTSIDE ROOMS  
150 WITH BATH  
420 W. 2ND ST. NEAR HILL  
NORTHERN HOTEL CO., PROP.  
FRANK L. CRAMPTON, MGR.  
RATES \$1.00 PER DAY AND UP

CAFE

IN CONNECTION

#### TOMATO SAUCE

Two quarts chopped or ground tomatoes, 4 tablespoonfuls chopped or ground onions, 1¼ cups celery (cut in small pieces), 1 tablespoon cayenne pepper, ½ teaspoonful ground cloves, ½ teaspoonful ground cinnamon, 1

teaspoonful grated or ground nutmeg, 6 tablespoonfuls sugar, 4 tablespoonfuls salt, 6 tablespoonfuls mustard seed, 1¼ cups vinegar. Mix without any heating and place in jar in cool, dry place; will keep a year without sealing



## That Good Taste

Certainly fruit that is canned at home tastes just right—and it's always economy to can fruit. Every housewife realizes that the place of home-canned fruit on the family diet list can only be taken by some food that is more expensive—while the food value of both the fruit and sugar is greater in proportion to the cost.

### CAN FRUIT AT HOME

## Eat More Bread!

"Eat lots of bread." You've read this advice by the world's best health authorities many times. It is all truth. There is as much energy in one pound of bread at 5 cents as there is in two pounds of meat at 25 or 30 cents.

You can greatly reduce the cost of living by eating more

## ROYAL TABLE QUEEN

"The Perfect Bread"

and discontinuing the use of heavy, ingestible foods, which bring distress to your internal organs, especially in warm weather.

Better health and added length of life come with careful selection of the food you eat. The flavor and crisp, brown goodness of Royal Table Queen will please and satisfy you beyond expectation. It is delivered to you the same day it is baked.

You will find "Royal Table Queen" appetizing, delicious, nourishing and easily digested. For sale by your grocer.



**Royal Baking Co.**  
Salt Lake City

When you answer the advertisements in this paper tell them you saw it in the Utah Farmer. Always buy advertised goods.

## Here and There On The Farm

### OLD STRAWBERRY BEDS SHOULD BE RENOVATED

Old Plants Should be Removed and Young Plants Given Chance to Develop.

As soon as the picking season is over, the strawberry bed should be mowed and raked off. The dead leaves around the old crowns should also be removed and burned. The rows are generally crowded with plants in the center, and these should be thinned out and the rest thoroughly cultivated with the hoe. Then the beds should be given a coating of well rotted barn-yard manure and worked into the ground, and a liberal supply of water applied.

In many cases where the rows are heavily matted and the young plants have taken root between the rows, it is advisable to plow up the center of the rows, leaving the younger plants to form the new row.

Strawberry plants produce the heaviest at the first season's fruiting and decline very rapidly after that time. For this reason, it is advisable to remove the old plants and give the younger ones a chance to develop. The old plants can easily be told from the young plants by the roots. Old plants have dark-colored roots, while young plants have light-colored. Also the crowns of the old plants become black and elongated, while on the young plants the crowns are short and light-colored.

Good fruit growers will ordinarily not fruit the beds more than two seasons, it being cheaper and more profitable to set out a new bed. But where only limited ground is to be had, the renovating system above described can be utilized to advantage. —E. P. Sandsten.

### POTATO VARIETIES

One or Two Kinds, Adapted to Soil and Climate, Most Profitable for Commercial Grower.

With the close of the potato harvest season for 1915 the time seems opportune to call to the attention of both the grower and the seedsman the desirability of considering seriously a very material reduction in the number of varieties grown in any given community or section of the country.

It has been the history of every other staple crop that the fewer the varieties grown the more easily are they marketed. The pioneer fruit grower in America tried to grow as large a list of varieties as he could afford to purchase, while today the tendency is to reduce the list to the least number that can be depended upon to meet the market requirements. The reason for this is that it has been found a much easier task to sell large quantities of one variety than an equal quantity made up of a large number of varieties. It is believed that the same principle applies to the potato crop.

In a recent publication by the department of agriculture a system of classification of potatoes is presented in which the leading commercial types are referred to 11 groups, and a list of the varieties studied which are thought to belong to each group is furnished. In many cases the varieties listed in each group are so nearly identical that in the opinion of the author of this bulletin there is no justification

for the retention of more than 10 per cent of them.

The commercial grower should determine what group or class of potatoes is best adapted to his climatic and soil conditions, and then confine his efforts to not more than one or two varieties within that group. In this way it will be possible for him to become more familiar with the behavior of the variety he is growing; to recognize its special cultural requirements; and to offer for sale a much more uniform and high-grade product than where he is dissipating his energies on a dozen or more varieties.

The potato growers of some of our Middle West States, particularly those of Wisconsin, are being strongly urged by their potato specialists and State associations to adopt the community plan of growing potatoes of one, or, at the most, two varieties. In this way the buyer can be assured of securing a uniform stock, in carload lots.

The size of the seedsmen's lists is very largely, if not entirely, governed by the grower, and the remedy lies wholly with him.

The efforts of the potato grower, dealer, and seedsman should be directed as follows:

1. Reduce the variety list to a few standard commercial varieties.
2. Standardize these by careful selection and culture.
3. Adopt the community plan of growing but one or two varieties and advertise this fact to the public.
4. Demand a higher grade seed potato from your seed grower or dealer, but in so doing be willing to pay a correspondingly better price for it.

### WORRY—ITS DANGER

#### AND ITS CURE

Worry wears worse than work.  
Worry destroys, work produces.  
Worry wastes energy, work utilizes it.

Worry subtracts, work multiplies.  
Worry dwarfs, depresses, confuses, kills.

Worry stops digestion, paralyzes the bowels, slows the heart.

Worry is known to cause diabetes, goitre, neurasthenia, and gout.

Worry anticipates failure and creates disaster.

Worry is a mind malady—a mental unsoundness.

Anxiety in the face of grave danger is natural and unavoidable.

Worry about petty troubles, or even big ones, is useless and may become a calamitous.

Worry is often a habit and may be cured by an effort of the will. Cheer up.—Dr. John Harvey Kellogg.

Keep on the line of safety.

Not what we know but what we do makes a success of the farm.

Selling butter from the farm carries away practically no fertility. Farm separation carries the skim milk directly back to the live stock and through them directly back to the soil, increasing the soil fertility and multiplying the salable products of the farm.

## THE USE OF



### Grease and Motor Oils

Cuts down the cost of lubrication and by detracting from the deterioration of the machinery, cuts down the cost of the machinery itself. An ideal lubricant for farm machinery.

Endorsed by leading miners, manufacturers and agriculturists—it is the best.

Ask any engineer—anywhere.

Write for liberal free sample—Postpaid.

### Guarantee Tire & Rubber Company

427-429 South, Main Street  
Salt Lake City, Utah.

### GREEN CONCRETE MIXERS

No matter how small the job all concrete should be thoroughly mixed. The old method of shoveling is tiresome from a physical standpoint and is very unsatisfactory for consistent mixing.

Our foot, steam or gasoline power mixers will solve the problem for you. Made in several sizes and endorsed by all who have used them. Made in Utah.

Write today for information and bulletins.  
GREEN MACHINERY and MFG. CO.  
American Building 338 So., Main St.  
First Building north of Post-Office  
Salt Lake City, Utah.

## Money to Loan on Farms

### LIBERAL TERMS

If you need money for additional improvements, to buy live stock or any other purpose let us help you.

Because of our long experience in the land business, we are prepared to give you the best service and protection.

Ask any bank in Salt Lake City as to our reliability.

Come and see us or write.

### Kimball & Richards

"Land Merchants"  
56 and 58 Main Street  
Salt Lake City, Utah.

When you answer the advertisements in this paper tell them you saw it in the Utah Farmer. Always buy advertised goods.



Questions and Answers

Utah Farmer: Carey, Idaho.

Dear Sir:—Will flax or rye when fed to mares with foal cause abortion. I lost three colts this spring all at about the same time while feeding mare rye and I was told that feeding rye so heavy was the cause. Please answer in your next issue?

M. A. C.  
Answered by Dr. H. J. Frederick.  
Flax or rye unless containing a large amount of smut or mold, has not been known to be injurious to animals, unless fed in enormous proportions. In that event any grain would be injurious. Where the grain is smutty it sometimes causes trouble, as you describe. Otherwise where fed judiciously it would not cause any trouble.

Alton, Utah.

Utah Farmer: Can you tell me who the State Officials are to inspect cattle diseases? We have several head of cattle with a disease of the jaw, I think it is tuberculosis it seems to be spreading in the herd and we are afraid it may injure our surrounding neighbors. If you can inform me who the proper officials are or report the case to them yourself I would greatly appreciate your kindness.

Yours respectfully, Otto Roundy.

Answered by Dr. H. J. Frederick.  
We have in the state of Utah what is known as a livestock inspector, to whom you should apply to have your animals examined for any infectious or contagious disease. His office is in Salt Lake City and it is his duty to look after troubles of this kind.

Ephraim, Utah.

Utah Farmer: Dear Sir:—I am writing for information concerning an epidemic which is spreading among the cattle here. They get stiff and lose control of their limbs, fall away very fast but continue to eat well. A number of them have died but others' seems to be slowly recovering. They are very stiff just after rising but limber up some after moving about. We have had a veterinarian see them but he seems unable to tell just what is the matter.

I should be very much obliged if you will answer this inquiry through the columns of your paper at as early a date as possible.

Respectfully, James Anderson.

Answered by Dr. H. J. Frederick.  
Where condition occurs as you have described, it might be a good plan to call in a competent veterinarian to diagnose the trouble. It is quite difficult for one not on the job to make a diagnosis of a trouble of this kind. It may be an infection of pink eye, a constitutional trouble often affecting cattle, or it may be cerebro spinal meningitis. The latter is usually caused by eating affected forage and is sometimes the cause of forage poisoning. In order to be safe regarding this, it might be well to call in a competent veterinarian in your locality to diagnose this affection.

Remember that a slip of the foot may crack a bone, but a slip of the tongue may crack a reputation or wound a character.

TEMPORARY PASTURES

The need of a temporary or annual pasture is felt by the farmer in numerous instances. A sudden increase in the amount of livestock may mean that the area of a permanent pasture is too small. Should the permanent pasture winter kill or be destroyed in any manner, some pasture must be supplied until another can be laid down for permanent use.

Some of the requirements of a temporary pasture are:

1. The ability to grow on exhausted soil.
2. Rapid growth—to furnish feed soon after seeding.
3. It must be persistent, not easily killed by grazing, and able to recover after being eaten off.
4. Cheap seed—because it is sown each year.
5. It must leave the land in good condition.

Annual plants are usually sown for temporary pastures. Those best adapted for such use are oats, barley, spring and fall rye, peas, vetch, rape, sorghum, and some of the millets. Sweet clover and red clover, while not annuals, are used in places.

Winter rye makes excellent pasture for late fall or early spring. It can be grown on poor soil, is ready to pasture in five to six weeks after sowing and, if not pastured, too closely in the fall, will furnish good feed the following spring. It should be seeded from six to eight pecks to the acre and it is well to drill the seed two or three inches deep to prevent stock from trampling the roots.


Rape is sometimes of value on the livestock farm as it will furnish good feed in the autumn when there is little other green feed. It may be shown on an oat field after the oats are well through the ground and will make good pasture after the oats are harvested. Clover and rape are sometimes seeded together on the oats. When a field is foul with weeds, the rapid growth of rape will usually smother them out. Three to four pounds of seed per acre are sufficient for any of the seedings.

Spring rye, oats, or barley sown singly or in mixtures make good summer feed. The addition of field peas to any of these cereals is a great improvement. One bushel of grain to one bushel of peas is usually to be recommended. The earlier these are seeded, the better the results.

A mixture of oats 50-60 pounds, Sudan grass 25 pounds, and red clover 10 pounds, will give pasture for a considerable time, the oats coming on early in the summer, the Sudan grass during the hottest weather, while the clover gives some fall feed. Two or three pounds of rape may be added to this mixture but if this is done, it would be well to use but half the original amount of Sudan grass. Where the summers are hot enough, other sorghums may replace the Sudan grass.

A succotash mixture of oats 4 pecks, wheat 2 pecks, barley 2 pecks, and rape 2 pounds, is proving satisfactory in places. Sudan grass (or other sorghums) and clover may be added to this mixture if desired.

Up to this time the millets and sorghums have proved valuable only where there is considerable summer heat.—G. S. Ray, Idaho Experiment Station.



### Better Things to Eat For the Worker on the Farm!

"You want things at your house that are nourishing and wholesome as well as tasty and tempting. Then take my advice—use Calumet Baking Powder every bake day."

"Such tender, light and appetizing biscuits, doughnuts, muffins, cakes and other goodies!—all so tempting you just can't keep away from them."

"My mother uses Calumet all the time and I know she knows what's best. It's unequaled for sure results—for leavening and raising qualities—for purity and economy. Try it on the money-back guarantee."

**Received Highest Awards**

New Cook Book Free  
See Slip in Pound Can





## AN ENGINE BOOK WITH A PUNCH

Would you build a house with a foundation like this? Would an iron kettle hold water better if the bottom were cut off and patched on again like this?

No! Then write for this new Book

### FREE A BOOK YOU NEED

JUST take a postal or scrap of paper and write the word "Why?" on it with your name and address and I will mail you this book.

Lively as a joke book. Sensible as the dictionary. Learn more about engines in 10 minutes than some men learn in a lifetime. The supply is limited so write quick.—ED. H. WITTE,

**WITTE ENGINE WORKS,**  
2069 Oakland Avenue, Kansas City, Mo. 3069 Empire Building, Pittsburgh, Pa.

**BUILT BY EXPERTS**

**Read These New Prices**

2 H-P,	\$29.95
3 H-P,	47.85
4 H-P,	64.75
6 H-P,	89.90
8 H-P,	129.80

Write for prices on 12, 16, and 22 H-P.



## POULTRY

### "SWAT THE ROOSTER!"

The state of Illinois offers statistics showing that for the year 1915, the farmers of the state received forty-five millions of dollars from the sale of eggs. In the same report, it is estimated that there was a loss of five millions of dollars from bad eggs. This heavy loss in bad eggs is attributed to the males running with the hens during the summer months.

Reports from other states place the loss proportionately high, and all agree with the report from Illinois as to the cause of the loss.

Males in the flock are useful only to fertilize eggs and the only fertile eggs required are those used for hatching purposes. An infertile egg will keep for weeks and months under conditions that would spoil a fertile egg in a very few hours.

Some states have started a movement known as "Swat the Rooster," the plan of which is to market on the tenth of May of each year, all males that are not considered as being desirable to keep over another year for breeding purposes. Such males as are kept over for breeding purposes, to be kept in separate pens from the general flock after the breeding season.

A report from Missouri estimates that on May 10, 1913, there were two hundred and twenty-five thousand males taken to market, and that the marketing of these males was a saving of four million dollars to the poultry men and farmers of the state of Missouri.

"Swat the Rooster and Produce Better Eggs" is a good slogan for Idaho. Let us think it over and then act.—Pren Moore.

### A DOZEN GOOD TIPS TO POULTRYMEN

Mr. Poultryman, if you take pride in marketing good eggs at a good price, consider the following:

Do not keep mongrel stock. They are not high producers, and their eggs are not uniform as to size and color.

Keep laying hens separated from setting hens.

Gather eggs carefully in warm weather twice daily.

Insist that your buyer candle and grade your eggs and that he pay a premium for "firsts" over "seconds." You cannot afford to produce the best and take a flat "case-count" price along with the producers of small, dirty, stale, inferior eggs.

The sale of infertile incubator eggs will never help you to establish a higher market price for your product.

Separate the male birds from the flock except during the breeding season. Fertile eggs are poor keepers.

Keep nests free from filth and provide plenty of them. It is the foul, dirty, unattractive nests that compels the hen to seek the weeds or some other undesirable place.

Market eggs in a standard egg case. Never haul to town over rough roads or in an open basket or pan exposed to the hot sun.

You will have the largest number of "firsts" if you market at least twice a week.

In keeping eggs, provide a dry, cool, well ventilated place. Fertile eggs must be kept below 68 degrees to ab-

solutely check germination.

Never wash eggs, it destroys their keeping qualities.

Eggs are easily affected by bad odors. Do not keep in a musty grain bin, or in the vegetable cellar, or where they can absorb the odors of kerosene and gasoline.—C. S. Anderson.

### DRY-FARMING IN SOUTHERN WASHINGTON COUNTY

(Continued from page 2)

two miles, established a townsite in the heart of the district and selling town lots with a view of providing for community life where social pleasures and school facilities can be enjoyed.

No surface water has yet been obtained, although wells have been dug at considerable depths, so that the piping of water and providing of a central place for the building of homes has solved an otherwise serious problem. This to the credit of less than a score of enterprising, progressive, yet frugal men, who are not afraid to battle with and overcome the stubborn conditions of frontier life.

#### Demonstrations

There are two co-operative demonstration farms located in this district, one at each end. The main purpose is to demonstrate how the ordinary man in ordinary circumstances can best employ his energy to develop his homestead into a paying farm, and also to demonstrate what crops to grow to meet the economic ends or purposes of farm production.

It is expected that these demonstrations will give inspiration and wholesome guidance in the application of proper dry-farm methods and encourage the development of the district.

The people engaged upon their homesteads are very much interested in dry-farm propaganda and seem eager to succeed.

This district will be heard from with some splendid results, within the next few years, when we can have successfully banished Mr. Jack Rabbit and adjusted our feelings to the system of "clean fallow one year; crop the next with no fear." It seems hard to resist the temptation of cropping our ground when it appears in good tilth and with good moisture at planting season; but if the basic principle as stated above is adhered to strictly, our woes will be diminished and our joys increased and every dry-farmer will be riding the winning horse and feel that he is the hero instead of the defeated in the race.

#### DESTINED

"I believe," declared the Irishman, "that me youngest son's born t' be a surgeon."

"Phwat leads y' to say that," asked his friend.

"Oi caught him using' the scissors on a book Oi'd lately bought, and before Oi'd stop him he cut out the appendix."

Tourist: "You have an unusually large acreage of corn under cultivation. Don't the crows annoy you a great deal?"

Farmer: "Oh, no, not to any extent."

"That's peculiar, considering you have no scarecrows."

"Oh, well, you see, I'm out here a good part the time myself."

# You're the man

who should wear

## Scowcroft's

"NEVER-RIP" OVERALLS

and

"MADERITE" WORK SHIRTS

## BECAUSE

They have greater wearing strength, more comfort and longer life than other makes—and they are UNION MADE.

You buy work clothes for comfort and service.

You get the utmost of these in

"NEVER-RIPS" and "MADERITES"

You buy satisfaction if the label says

## SCOWCROFT'S

John Scowcroft and Sons Co.

Ogden, Utah.

The Utah Work Clothes Mfgs.

## Summer Excursions East and West

Via



Sale Dates:

May 13, 17, 20, 24,  
27, 31; June 3, 7,  
10, 14, 17, 21, 24,  
28; July, 5, 12, 19,  
26; August, 2, 9,  
16, 23, 30;  
September 6 and  
13.

Limit:

October 31st. 1916

Sale daily May 1  
to September 30  
inc.

Limit:

October 31, 1916.

Following round trip fares will apply from Salt Lake City or Ogden:

Denver and Colorado Springs.....	\$22.50
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St. Louis .....	51.20
Chicago .....	58.00
Memphis .....	60.00
Minneapolis or St. Paul.....	56.44

Proportionately low rates from and to many other points.

Following round trip fares apply from Salt Lake City:

Spokane, Portland and other intermediate points .....	\$42.00
San Francisco or Los Angeles direct .....	40.00
San Francisco via Portland one way .....	58.50
Los Angeles via Portland one way .....	68.50
Tacoma .....	47.80
Seattle .....	49.50

See agents for further details.

**CITY TICKET OFFICE,**

Hotel Utah,

Salt Lake City.



THE FARMERS' MARKET PLACE

For the Buyer

This market place offers our subscribers and readers a very good place to advertise. If you have something to sell or want to buy here is the place to tell it. These advertisements are read because they offer bargains, your bargain should be here. Take advantage of this opportunity today.

For the Seller

Gem Herd of Improved  
Chester White Swine

This Herd Bred, Raised and Sold. Both Boar and Sow Grand Champions of the World's Fair held at Frisco this last year. Both Sire and Dam, is still in the herd. If such breeding interests you, write for illustrated catalogue. Stock of all ages for sale at all times.

Address

GEO. H. LAWSHE

Falls City

Idaho

HOLSTEIN BULLS FOR SALE

Sons of Wachussetts Creamelle George the 2nd whos daughters have made from 350 to 500 pounds of butter fat a year just with ordinary care. Wachussetts was 2nd prize aged bull at the State Fair last fall and all of his get were first in their class but one. His dam gave 105 pounds of milk in a day that tested better than 4 per cent. No. 1 Iowana George 3rd a fine 18 months old son of Iowana Colaneth Alberkerk. A high testing heifer from Iowana Farms, Iowa, her dam has a 19 pound record. This young bull was Junior Champion at the State Fair. The first check for \$200 takes him. No. 2 Wachussetts Beauty a 12 month old son of Maudeline Of Beechwood Beauty with a 23 pound butter fat record, milk test 4.6. She is a full cousin to Colanetha 4ths Johana, \$150 buys this one. Take no chances, get a bull from a proven sire and one that has produced the goods. Offer several others from 6 months to 1 year old from \$75 to \$125 each.

J. W. STUBBS

Charleston

Utah

BATES AND SONS  
Provo, R. F. D. No. 1.

Breeders of S. C. White Leghorns and R. I. Red fowls and Airedale Dogs.

UTAH HATCHED WHITE LEGHORN  
BABY CHICKS \$11.00 PER 100  
Circulars, order-blanks, etc., upon request. Candee Colony Brooders carried in stock.

GLENWOOD EGG FARM

R. D. 3 Murray, Utah

40 PER CENT OFF

on eggs for hatching for balance of season and on breeding stock as long as they last.

4 BEST LAYING STRAINS

R. C. Reds and White Wyandottes S. C. Black Minorcas and White Leghorns Stock sold on approval. Infertile eggs replaced free of charge. Now is your chance to get a Bargain. Write

E. C. BLANPIED

Box 60 Milford, Utah

BABY CHICKS & HATCHING EGGS

White Leghorns, Brown Leghorns, Barred Rocks, R. I. Reds, Black Minorcas, Anconas, Buff and White Orphingtons. Prices on application.

THE ORLAND HATCHERY

Orland, Glenn Co. California

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ONE ACRE

Good land between 13th and 14th South for quick sales; \$425, \$10 cash, \$10 per month.

9 acres between 13th and 14th South, good for dairy or gardening. Can cut into lots later; only \$400 per acre, \$200 cash, balance easy, or might trade.

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707 Walker Bank Bldg.  
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Salt Lake City, Utah.

GOING OUT OF BUSINESS

Duroc Jersey pigs for sale \$5.00 each, two months' old. Two old imported boars and three sows to be sold at a sacrifice.

H. RONNENBERG

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20 ACRES

farm in sugar beets, close to beet dump, good improvements, the best of soil, water and climate, nearly ideal and the price for this home is \$3500.00. Terms reasonable.

If you want one of the very best 60 acre farms in the valley, with improvements to correspond, a perfect dream, just the one you want, price is right. For prices and terms on variously sized farms in the Great Bear River Valley you must call or write to the

Bear River Valley Real Estate

and Insurance Agency

Tremonton

Utah

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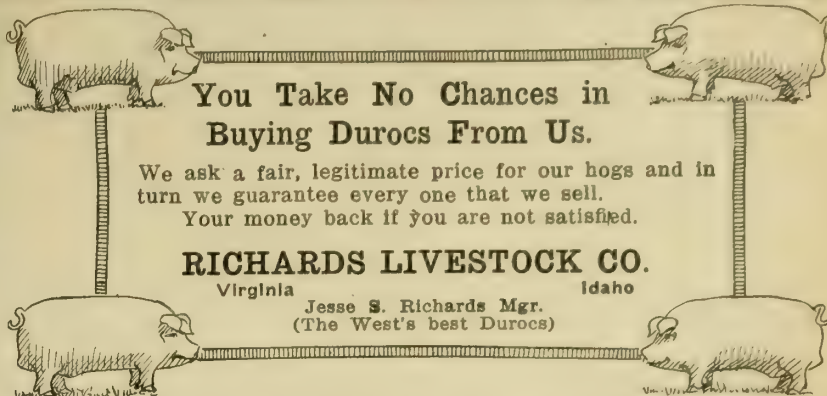
Six expert irrigators, levelers and fresno men. Address

A. G. MACALLAN

Battle Mountain

Nevada

Always remember that it is much easier to sell a good animal than it is to buy one.




You Take No Chances in  
Buying Durocs From Us.

We ask a fair, legitimate price for our hogs and in turn we guarantee every one that we sell. Your money back if you are not satisfied.

**RICHARDS LIVESTOCK CO.**  
Virginia Idaho  
Jesse S. Richards Mgr.  
(The West's best Durocs)

**BALLAMOAR FARMS**  
Richmond, Utah. BERKSHIRES



The blood of champion breeds on  
Rivals Premeirs Master 139600, the greatest boar in Utah is at the head of this herd of prize winning Berkshires.  
Ames Rival 24th 153236, a champion and sire of champions is another herd boar.  
Young pigs for sale at reasonable prices. Pairs not related can be furnished.

**CAINE LIVE STOCK CO.**  
Richmond Utah

Wanted to hear from owner of good ranch for sale. State cash price and description. D. F. Bush Minneapolis, Minn.

FOR SALE

At half price, one registered pure bred Percheron mare seven years old. Weight 1830 pounds. Imported from France by J. H. Moyle. Also her two year old stud colt is for sale.

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Farmington, R. D. 53

Davis Co.

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We carry a large stock of the Best Vegetable Parchment Butter Wrappers and Especially Prepared Ink for Printing the same. We furnish them Postage Prepaid at the following Prices, money to accompany order.

100	.....	\$ .90
200	.....	\$1.25
500	.....	\$2.25
1000	.....	\$3.00

Send all orders to

THE UTAH FARMER  
LEHI, UTAH

SHALL WE VOTE FOR THE TAX  
AMENDMENT NEXT NOVEMBER  
(Continued from page 2)

ation, and to this extent relieve the owner of the small home and the small farm. But here again the papers of our state almost with exception warned the people to vote against the amendments, for their only object was to raise the taxes, and this argument is final if it be true.

Two further objects of similar importance and justice to the taxpayers of the state were also voted against, and defeated by the citizens of the state under the mistaken idea that their objects were to raise the taxes of the people. They will be discussed in the next article.

At the last legislature an amendment to the Constitution of the State of Utah, recommended by the National Tax Association of the U. S. and adopted into the constitution of many of the states, was passed and will be voted upon this fall, which amendment will make possible the correction of the above inequities of our present laws, and others to be discussed hereafter.



## Farmers and Housewives Meetings

A number of meetings will be held by the Extension Division of the Agricultural College in the Southern part of the State. The parties who will be the speakers will consist of Dr. R. J. Evans, Dr. W. E. Carroll, Mr. J. W. Paxman, Miss Gertrude McCheyne.

Here is the time and place of meetings:

### Kooshare

8:15 P. M.—Conjoint Meeting.  
Wednesday, July 26—

### Loa

2:00 P. M.—Separate Meetings.  
8:00 P. M.—Conjoint.

Thursday, July 27—

2:00 P. M.—Separate Meetings.  
4:00 P. M.—Stock Judging.

8:00 P. M.—Conjoint.

Friday, July 28—

### Thurber

2:00 P. M.—Separate Meetings.

4:00 P. M.—Stock Judging.

8:00 P. M.—Conjoint.

Saturday, July 29—

### Coyote

2:00 P. M.—Separate Meetings.

4:00 P. M.—Stock Judging.

8:00 P. M.—Conjoint.



### Keep Your Food

at exactly the right temperature for preservation without the aid of ice—with no expense—no trouble and in the most sanitary manner.

A syphon and evaporation system keeps a current of cool, pure air passing constantly through the compartments.

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P. O. Box 543.  
Phone Was. 405.

Agents wanted in Utah,  
Idaho, Montana, Wyoming  
and Nevada.

Sunday, July 30—

### Junction

Monday, July 31—

2:00 P. M.—Separate Meetings.

4:00 P. M.—Stock Judging.

8:00 P. M.—Conjoint.

Tuesday, August 1—

### Circleville

2:00 P. M.—Separate Meetings.

4:00 P. M.—Stock Judging.

8:00 P. M.—Conjoint.

Wednesday, August 2—

### Panguitch

2:00 P. M.—Separate Meetings.

8:00 P. M.—Separate Meetings.

Thursday, August 3—

### Panguitch

2:00 P. M.—Separate Meetings.

4:00 P. M.—Stock Judging.

8:00 P. M.—Conjoint.

Friday, August 4—

### Orderville

8:00 P. M.—Conjoint.

Saturday, August 5

2:00 P. M.—Separate Meetings.

4:00 P. M.—Stock Judging.

8:00 P. M.—Conjoint.

Sunday, August 6—

### Kanab

Monday, August 7—

2:00 P. M.—Separate Meetings.

8:00 P. M.—Separate Meetings.

Tuesday, August 8—

2:00 P. M.—Separate Meetings.

4:00 P. M.—Stock Judging.

8:00 P. M.—Conjoint.

Wednesday, August 9—

### Hurricane

2:00 P. M.—Separate Meetings.

4:00 P. M.—Stock Judging.

8:00 P. M.—Conjoint.

Thursday, August 10—

### Rockville

2:00 P. M.—Separate Meetings.

4:00 P. M.—Stock Judging.

8:00 P. M.—Conjoint.

Friday, August 11—

### Little Zions Canyon

Saturday, August 12—

### Toquerville

2:00 P. M.—Separate Meetings.

4:00 P. M.—Stock Judging.

8:00 P. M.—Conjoint.

### RAISIN PUFFS

$\frac{1}{2}$  cup butter.

1 tablespoonful sugar.

$\frac{1}{2}$  cup milk.

1 egg.

$\frac{1}{2}$  cup raisins.

1 cup flour.

1 teaspoonful baking powder.

Place in buttered cups in a steamer and steam for half an hour. The above recipe makes four puffs, but when eight are needed I just double the recipe. Serve with the following sauce or any good pudding sauce desired:

One cup sugar, 2 tablespoonfuls butter; stir to a cream, then add the white of one egg beaten stiff. Pour in one pint of boiling water, stir until melted. Set it on the fire till it boils. Flavor to taste.

### GRAPE JUICE

Steam and wash thoroughly ripened grapes and cook in a granite kettle with a very little water until the fruit is quite soft. Pour into a cheesecloth bag and allow all of the juice to drain out. Measure the juice and allow three cups of granulated sugar to each gallon of juice. Boil rapidly until the sugar has dissolved, removing any scum that rises on the top, then pour into bottles or mason jars and seal immediately.

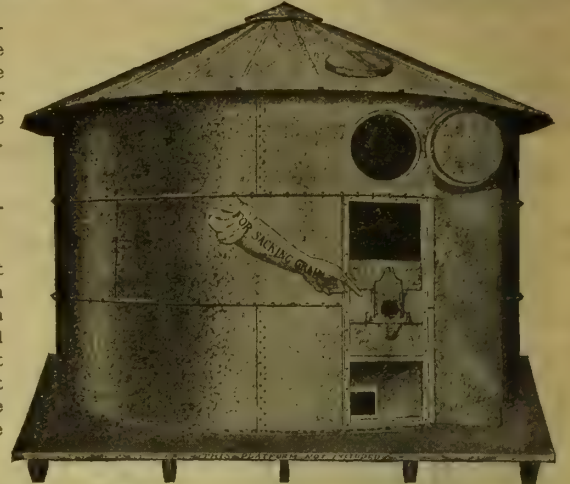
Some people enjoy being miserable; they can't be happy otherwise.

## WHY NOT YOU---MR. FARMER

Thousands of farmers every year make the serious mistake of disposing of their crop at harvest time or immediately after.

THE PRICE IS  
LOWEST AT THAT  
TIME

Statistics show that the man who can handle and hold on to his crop until after the harvest flurry is the one that really gets the price for his grain that he is entitled to.



### GRAIN BIN IS THE SOLUTION

Thousands of dollars are saved to the farmer every year who has had the forethought to invest in this essential to all grain raisers—The Grain Bin. More is to be made by the farmer who invests in one this year for the first time. This from the fact that there will be a greater demand for grain and the fact that he will be able to carefully keep his crop until the price is such that he can get a good figure for his harvest.

### "BUY A BIN"—MR. FARMER

Can you afford to let the opportunity slip? Get in touch with us today and let us tell you all about it. A postal card will bring the information.

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## What More Do You Want?

Fifty acres of high grade land in one of the most fertile sections of the State.

Soil a rich black loam that raises fruit, beets, alfalfa, alfalfa seed and garden truck—all in abundant crops that will compare favorably with any section.

Located on the railroad adjacent to two very live towns that furnish an excellent market for small products. Both of these towns are within short driving distance. Good schools nearby.

Would make an elegant farm home for the man that wants a farm not too far away from the business centers.

Prior water right at \$1.50 per acre if used.

**CAN BE BOUGHT VERY REASONABLE**

Look it up today—see or write

**W. C. ALBERTSON**

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Salt Lake City, Utah



UT

## The Growing of Sugar Beet Seed

(See page twelve.)



Upper Figure—Typical Selected Beets. Middle—Seed Being Produced from Upper Figure—Silo of Stechlinge. Middle—Storing Selected Beets in Sand. Selected Beets. Lower—A Good Mother Beet, Showing Seed. Lower—Field of Sugar Beet Seed.





**Be thinking now of next Silo filling**

The farmer with a big, broad smile these days, is the one who was ready last fall to hustle his corn into the silo on a minute's notice, and wasn't worrying about getting it there, either, because he had a

**BLIZZARD Ensilage Cutter**

The Blizzard is the tried and true cutter for the farmer. Simple, easy to run, safe. Small engine runs it. Big cutting capacity and unlimited elevating capacity. Self-feed table saves one man. Steady as a clock. Many in use after fourteen and fifteen years. Repair expense very small.

Come in—get a catalog and let's talk over the Blizzard

Intermountain Concrete Co., Ogden, Utah.



Sold mounted or unmounted

### WE MAKE

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in Utah, Idaho,  
Wyoming, Oregon and  
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or SAN FRANCISCO  
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BEAUTIFUL SAN DIEGO  
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Salt Lake City, Utah.



### WATER PROOFING CEMENT

For some purposes such as the building of tanks, it is very important to have a water-tight concrete. However, in discussing this subject a distinction should be made between seepage through holes and leakage through cracks. It is my intention to speak of the first only.

In order to understand the subject it may be well to distinguish between porosity and permeability. Porosity is measured by the percentage of voids, i. e., the interstices between the particles, while permeability is measured by the amount of water that will pass through the material in a given time under specified conditions.

Because the percentage of voids is high does not necessarily mean that the concrete is permeable; neither does a low percentage of voids always mean that the concrete is impervious. In the first case, the voids may be small and not interconnected, which results in an impervious concrete. It is safe to say, however, that the denser the concrete, the more impervious. This brings us to the best method of rendering concrete water tight, i. e., by properly grading the ingredients so as to make the most dense concrete.

It is difficult, however, under ordinary circumstances, to make the proper sieve analysis to determine the proper proportioning of the ingredients; but a few general rules may help to obtain good results. 1st. The greater the proportion of cement, the less the permeability; usually if the materials are fairly well graded, cement equal to 12 to 15 per cent by weight of the dry materials will give a water-tight concrete. 2nd. Gravel produces a more water-tight concrete than broken stone. 3rd. The larger the maximum size of the aggregate (the gravel or broken stone) the less the permeability. 4th. Wet concrete (that is, wet enough to quake freely like jelly) makes the denser concrete. 5th. The more thoroughly the concrete is mixed the denser the concrete. In order to secure the best results the concrete should be laid in one continuous process, or if this is impossible, great care should be taken to join the fresh concrete with that already laid.

The proportions used to render concrete proof against percolating water are from 1:1:2 to 1:2½:4½; 1:2:4 being the most common. However, with a careful grading of materials a much leaner mixture can be used.

By troweling the surface of concrete, it is possible to render it almost absolutely water-tight. This, however, is not applicable to vertical walls.

A very common method of making concrete impervious is by the addition of hydrated lime. It is cheap, easily obtained, and easily mixed with the concrete. If dry hydrated lime equal to about 8 per cent of the weight of the dry cement be added for a 1:2:4 mix, or 12 per cent for a 1:2½:4½, the concrete will be rendered water-tight under a pressure of 60 pounds per square inch.

Another method, more expensive however, but equally satisfactory, is to dissolve in the water used for the mixture one part by weight of alum and 2.2 parts of hard soap. This weakens the concrete slightly, but renders it practically impervious. This method has been in use for a great many years.—G. P. Stocker, Dept. Civil Engineering.

# To Play Piano Well

One should have the benefit of the best rudimentary instruction in the beginning. This can only be done by selecting the most competent instructor.

## Prof. J. J. McClellan's Piano Course

Written by this eminent instructor and performer for the particular instruction of those who cannot come to him in person—gives you the benefit of his teaching in a way that enables you to become proficient in a short time.

## This Is The Course---

we are offering to all our students of piano. It has been very successful and is well liked by all who are studying it.

WE ALSO HAVE COURSES IN VIOLIN, VOICE, ORGAN, DRAMATIC ART and BAND INSTRUCTION.

All of these courses are compiled by the best talent that can be secured and are written in that understandable form that allows you to grasp the instruction easily.

### SEND IN THE COUPON—TODAY

See how simple it is to study your chosen subject with the instruction coming from the best talent in this part of the country. You will be under no obligation to us and we will be very glad to explain.

## Utah Conservatory of Music

Templeton Building

Salt Lake City, Utah

### MAIL THIS COUPON—TODAY

UTAH CONSERVATORY OF MUSIC

Templeton Building, Salt Lake City, Utah.

Gentlemen.—Send free—information regarding the course checked. It is understood that I am not obligating myself in any way.

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Address.....

City..... State.....

Piano Organ Voice Violin Band Instruction Dramatic Art



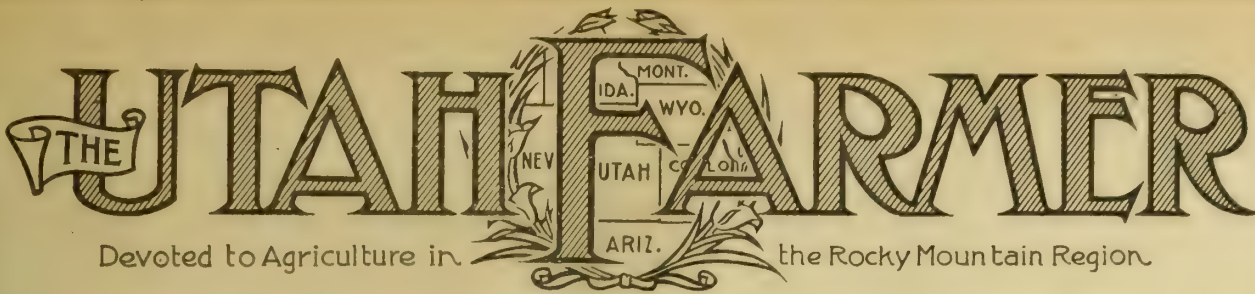
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VOLUME XII.

LEHI, UTAH, SATURDAY, JULY 8, 1916

No. 49

## Farmers Keep Your Accounts

By E. B. Brossard, State Farm Management Demonstration Agent.

Take 30 minutes one night each week for your accounts. Enter into your **Account Books** in the places provided all **Farm Receipts** and **Farm Expenses** that have occurred in your Farm Business transactions since January 1st, 1916.

### Receipts

There are in the books, provided by your County Agricultural Agent, pages on which should be entered all Receipts from sales of **Farm Crops** such as hay, straw, wheat, oats, barley, etc., sold since January 1st, 1916. All Receipts from **Farm Crops** should be entered on page 9 of your Farmers Account Book.

Receipts from the **Sales and Trades of Livestock** since January 1, 1916, should be entered on page 10 of this book. Where a horse or a cow, etc., is traded it should be credited here in Livestock sales and trades, the amount received being the value which you place upon the horse or cow. The animal being received in exchange for this horse or cow should be entered as horse or cow purchased and should be charged as a farm expense under **Stock Bought** on page 27 of your Account Book.

On page 11 enter all receipts from the sale of **Dairy Products** since January 1, 1916. This of course will include your milk checks from the creamery for the respective months of January, February, March, April, May, and June, and each month hereafter until January 1st, 1917, as well as all sales of butter to the store, milk to private families, cream to confectioners, etc. All butter taken to the store and traded for groceries and home provisions should be credited here as cash sales.

Pages 12 to 16 inclusive are provided for the entering of all receipts from the **Sale of Eggs**. Spaces are arranged for the entering of the Date of Sale, No. Dozen Sold, Price per Dozen received for the same, and total amount received. All eggs traded for groceries should be entered here as cash sales. If you have not kept an accurate account of egg sales up to the present time, estimate the amount sold to date since January 1st, and enter into the book the daily or weekly sales hereafter. All farm crops, live-stock, dairy products, eggs, etc., paid in as tithing or to other charities should be credited to the farm as cash sales.

All **Miscellaneous Receipts** should be entered on page 17 of this Account Book. The Miscellaneous receipts should include such items as; money received for labor for others either with your teams, wagons, plows, etc., or single handed, any cash rent you might have received to date for land rented out,

machinery, or for the pasturing of your neighbors' cows in your pasture, etc., and all other **Farm Receipts** which are not entered on a previous page of your Account Book.

### Expenses.

All **Farm Expenses** incurred since January 1st, 1916, for which cash was paid should be entered on pages 19 to 29 inclusive. Do not enter here household or personal expenses, such as expenses for clothing, groceries, pleasure or the like, but enter all **Farm Expenses** giving the date paid, the item of expense, and the total amount of expense in the blanks provided.

**Labor Expense** should be entered on page 19 and should include the amount paid for all hired labor since January 1st, 1916. Some labor may have been hired for plowing harrowing, planting, or general spring work; some may have been hired for harvesting your first crop of alfalfa; no matter what the labor was hired for, it should be itemized giving date paid and amount of expense. The cattle men will perhaps have some extra help for feeding, marking, branding, herding cattle, etc.; while the sheep men will have the labor expense of feeding, herding, lambing, shearing, etc. Whatever the labor or which the expense was incurred it should be itemized and entered on page 19 of your Account Book.

The expenses since January 1, 1916, for all **New Machinery** bought, **Repair of Machinery**, **Blacksmithing Bill**, **Hardware Bill**, and **Horseshoeing**, should be itemized and entered on page 20 of your book.

The expenses for **New Fences**, **Repair of Fences**, **New Drains**, **Repair of Drains**, **New Buildings**, and **Repair of Buildings**, should be entered on page 21. These items are very important as they constitute a considerable part of the farm expenses for the first six months of each year.

**Feed Bought** since January 1st, 1916 should be entered on page 22. This item in many cases is very high this spring and ought to be accounted for in detail. It should include the amount of hay, grain, straw, pulp, syrup, pasture, etc., bought and paid for since January 1st, with the date of purchase and the total amount paid out for each kind of feed.

On page 23 you will notice that there are listed the following items of expense which are to be entered there: **Feed Grinding**, **Silo Filling**, **Corn Shredding**, **Twine Bought**, **Thrashing Bill**, **Baling Hay**, and all **Other Machine Work** hired such as **Drilling Grain**, **Sugar Beets**, etc. Of these items named those that no doubt have already occurred on your farms

(Continued on page 7)

## Lice and Mites On Poultry

By Helen Dow Whitaker.

Some one computed the loss to Missouri caused by the surplus male. The slogan went forth, "swat the rooster," and the poultry industry scored a point for its betterment. Having swatted the rooster, why not go a step farther to "smite the mite?" Tremendous as it is, no one has computed the damage done by the mite. While one was computing the number, the mites would have increased to millions.

The common chicken mite (named *Dermanyssus gallinae*) is not so long as its name, measuring less than 1-20 of an inch. It is plainly visible to the naked eye; a little elliptical, flattened body with eight slender, tapering legs, a pair of short feelers and between them a pair of needle-like jaws with which it pierces the flesh of its victim to suck out the blood upon which it dines. In color the hungry mite is pale gray with dark dots on its back and sides. The after-dinner mite is reddened with the blood of its victim.

The mother deposits her tiny egg in a crack or crevice of the wood. Her idea of a cozy cradle for her baby is a crack lined with a mussed, soiled old feather, or a crevice in which is a little heap of manure or other filth to furnish dampness and heat. Here is also an incubator which gives a 100 per cent hatch in about three or four days. The tiny whitish, six-legged baby feeds on the filth it is born in. A spoiled egg broken in a dirty nest will furnish delectable food for a thousand. In a few days they shed their skin and crawl forth upon eight legs like the parents that begot them. About ten days elapse between hatching and maturity. Mites live upon the fowls only when feeding, preferably by night. Where they are numerous they can be found on the hens by day, or crawling about the building, but their habit is to eat at night, then desert the victim for a dark, dirty crack in which to sleep by day.

The bureau of entomology at Washington, D. C., is authority for the statement that the pigeon mite is a different species from the chicken mite, and that pigeons are not responsible for the spread of the chicken pest.

Another mite that attacks poultry is the *Cnemidocoptes mutans*, having also the simpler name, the itch mite. These mites are the cause of scaly-leg and often occur on combs as well as legs. They are microscopic in size with extremely short legs. They burrow in the skin and cause the poor victim to suffer with an intense burning itch. While one can not see them with the naked eye, their presence is

made plainly evident by the crust of loosened skin and tissue formed over their burrows.

Of the little microscopic depluming mites there are two closely related. One burrows near the base of the feather, causing an irritation, in an attempt to allay which the hen pulls out her own feather. The other lives and feeds on the feather, its most serious injury being to the appearance of the fowl.

These then are the four common varieties of mites—only one large enough to be visible to the unaided eye. Of the other three it might be said: "By their works ye shall know them."

**Remedies.**—In considering remedies for these pests, first hold in mind the conditions under which they breed and thrive. Is there a dropping board in the hen house that holds the accumulation of a week? If there is you have a mite incubator. a million or two capacity, set for a hatch. In the cracks and corners have the soiled old feathers of the molt heaped up? Each one is an incubator for a thousand mites. Has the damp and dirty straw litter been raked out and the floor beneath been scraped clean, or has new straw been piled upon old filth, thus making a giant hatchery for mites? Consider the nests, are any broken eggs left in their straw to decompose and feed the pests? Are there any sitting hens in soiled boxes to mother them? Any filthy, soured feed troughs to breed them?

The first remedy for mites is to rake up, spade up, sweep up, and scrub up. For the raking use a steel tool with close teeth. For the scraping of all packed ground and of all boards use a sharp garden hoe or narrow spade, applied with plenty of lubricating oil from the elbow. Do not be afraid to scrape down through the filth to fresh soil or clean wood. For the sweeping use a stiff whisk broom for all nest corners and crevices, and a deck broom for floors, dropping boards, etc. For scrubbing nothing is better than Pearline and Dutch Cleanser. At least three times a week each wet mash trough for feeding sprouted oats and drinking dish should be absolutely as clean as hot water and Dutch Cleanser can make it. At least two times a year every nest and roost and dropping board and feed hopper and shelf they rest upon and board floor and all the walls and overhead braces and rafters should be thoroughly swept free from dust. This much done, the treatment for the mite-infested house really begins. The deck has only

(Continued on page 14)



## DAIRYING

### COST OF MILK PRODUCTION W. F. Merrill.

The average dairy cow, the cow which is in use on the majority of dairy farms in the country today, is the most expensive factor with which we have to content in the dairy business. If it is true, that she produces only 150 pounds of butterfat annually, then it is most certainly true that she is charging considerably more for every pound of butterfat than any farmer can possibly get for it.

I saw a statement recently in one of the dairy papers to the effect that it costs \$107.67 to keep a cow in New York State. In New Hampshire figures were obtained from twenty-six herds, all of which, were enrolled in a cow testing Association. These cows were considered to be a little above the average of the New Hampshire cow. The cost of keeping a cow was determined to be \$147.73. A quart of milk cost \$0.042.

I presume that farmers in New York are keeping good cows and that in New Hampshire they are very much better than the average cows of the Middle West and the Far West countries, for in these sections we will have to go out of the business or else get better cows if our cost of maintenance runs as high as it does in the states mentioned.

There are two ways however, whereby we can reduce the expense of milk production. One way is to use more good common sense on the feed question, and the other, is to use a cow that possesses some milking heredity.

Some work has been done at the Minnesota Sub-Station, located at Grand Rapids, under the direction of J. A. McGuire which proves this point most forcibly.

Mr. McGuire bought common cows, because he wanted to teach the Minnesota farmer a practical lesson in a practical way. Here is the lesson. Cow "Sella" was a grade, Red Poll Cow. Her record for five years was 153 pounds of butter fat. Cow "Sella II" was the first daughter. Her sire was just a scrub, yet her record for five years was 211 pounds. Environment must have played its part in this case.

"Sella III" had a red poll for a sire and her record was 319 pounds of butter fat.

"Sella IV" had a Guernsey sire and her record for three years averaged

307 pounds. Her record during the third milking period was 344 pounds.

"Bell" was a half-blood red bull, the other half was just cow, her ten year record averaged 230 pounds.

"Bell II" was sired by a Red Poll and her four year record averaged 171 pounds.

"Bell III" had a Guernsey sire and for three years she averaged 32 pounds, during her third year she produced 370 pounds.

"Bell IV" was sired by a Guernsey and at two years of age produced 231 pounds fat.

There are several other individual cow records given in the report, but Mr. McGuire's summary tells the whole story.

"During a period of ten years records were kept of 91 cows and heifers. Thirty-six were common cows and their average yearly production was 197 pounds.

Fifty-five were grades with dairy breeding. Their average was 245 pounds of fat or an average of 45 pounds of fat increase over a common cow.

Ten half-bloods guernseys made 213 pounds more profit than their mothers and half sisters which were without the dairy breeding. The sires value with ten cows for six years was \$1,278.00.

Similar results have been obtained by other men. In fact, whenever a bull of good dairy breeding is used on common cows, there is an increased production of from 40 per cent to 60 per cent, providing of course, that the feed and care have been such that the improved breeding can manifest its influence. Too many dairymen handicap good breeding with poor feeding.

### COW TESTING ASSOCIATIONS

There is going to be a keen, friendly rivalry between the members of the three cow testing associations now organized in southern Idaho. These organizations are all organized in counties which employ agricultural agents. These report that the interest in the improvement of dairying already stimulated, far exceeds the anticipations. Now County Agent Morrison of Franklin county, which is the center of a large dairy farm section, will work for an association in this county. The tests show that our herds compare usually well with those of Eastern states. Thus in Ada county, with less than 500 cows in the testing association, 63 cows last month showed a record of over 40 pounds of butter fat produced in one month while 16 herds have an average production each of over 30 pounds a month per cow. Reports are that "One of the most remarkable things was the showing of the Jersey herd owned by S. Lee. This herd made a record of 46.5 pounds of butter fat per animal, though half of the cows were two year old heifers with their first calves. The highest individual record, 63.1 pounds of fat was made by a grade Holstein cow owned by A. Records. Interest in the association is very keen and the contest for first place each month will be close."

It is a mistake to sow alfalfa on land not containing bacteria which lives upon its roots.

## Will Develop The Dairy Industry

A movement that has for its purpose the development of the dairy industry in Utah was discussed at a meeting and banquet held in the Hotel Utah Wednesday evening.

Governor Wm. Spry invited a number of gentlemen representing the different interests of the state to meet and see if something could not be done to help the dairy industry. The response was very good.

Governor Spry presided and outlined the object of the meeting. He reviewed the dairy conditions in Utah and called attention to the success that had come to those of Cache and Weber counties who had engaged in the dairy business. He spoke of the possibilities in Salt Lake, Utah, San Pete, Sevier and other counties of the State.

Mr. Fred W. Merrill was the principal speaker of the evening. He compared local conditions with those of the great dairy producing states. Explained how much more favorable were our opportunities here than they were farther east. Told of Wisconsin only a few years ago producing only a few millions in dairy products now led all the other states with an output of 100 million dollars. Wisconsin buys from Utah, Idaho, Montana and Colorado alfalfa and grain and then sends it back to us as the manufactured product of cheese and butter.

Mr. Merrill outlined a plan similar to those used in other states how we in Utah should get together and raise a fund to buy dairy cattle and pure bred bulls in order to boost our dairy business. It is not a charity proposition but a development movement. It has proven profitable in many sections and he felt it would in Utah.

The plan as outlined was to bring in to the state some good dairy cows and put them out to farmers who had feed and place to care for them on a basis of three dollars a month. The loan association to take a chattel mortgage on the cow and her increase until paid for.

To employ a competent man whose duty it would be to supervise the organization of communities along the lines of live stock development. To see that good cattle were purchased and help the farmers in connection with the Agricultural College and Federal Dairy Division in seeing that they were properly cared for.

Among others who spoke favorably of the proposition in its various phases was J. W. Hendricks who explained what his company had done in helping the farmers of Cache County to buy cows. He also told of visiting other dairy sections in the northwest and how they were producing butter fat at a lower rate because more modern methods were employed. The other speakers were George A. Snow, Judge Elias A. Smith, J. R. Murdock, W. F. Jensen, George M. Cannon, George Austin and Frank B. Stephens.

President-elect Peterson of the Agricultural College told of the educational work they were willing to do and had been doing in all parts of the state along dairy lines.

A committee was appointed who will meet Friday night at Salt Lake City and continue the work of perfecting an organization to carry out such plans as they may decide upon. The



**Cold! But Not Too Cold! Just Right**

The wonderful ICELESS GEM keeps the food at just the proper temperature for preservation, sweetness and health.

**No Ice—No Expense**

A constant current of cool air passing through wet walls keeps food fresh and sweet.

**REGAL MFG. CO.,**

730 State Street,  
Salt Lake City.  
P. O. Box 543.  
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Agents wanted in Utah, Idaho, Montana, Wyoming and Nevada.

**If you want money, drop us a line.**

We loan on first mortgages on Utah farms or Salt Lake City real estate at reasonable rates.

Prompt action and fair treatment if you do business with us.

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WALKER BANK BUILDING  
SALT LAKE CITY



**Garmesa Farms**

Use a Pure Bred

**Holstein Friesian Bull**

from an Advanced Registry Dam. He will increase the production of your herd.

Write us

Fruita, Colo.

Uncle Sam will carry your money in the mails to and from this old bank.

4 per cent paid on savings

**Walker Brothers Bankers**

Founded 1859

Resources over \$6,500,000.

SALT LAKE CITY





committee were Gov. Wm. Spry, Chairman; Fred W. Merrill, W. W. Armstrong, F. M. Mickelson, Geo. Austin, Preston G. Peterson, John T. Caine III, O. C. Beebe, J. W. Hendrick, Geo. M. Cannon, James M. Kirkham, Elias A. Smith, R. B. Stephens, E. O. Farnsworth and John Pingree.

#### TAKE CARE OF CREAM

George S. Hine.

It pays to be particular. Would farmers and cream station managers exercise more care in handling the raw product which is sent to the creameries, the butter would sell as "extra." This would mean increased profits.

"The creameries are almost without exception equipped with the latest and most efficient machinery and have in their employ the best men money can procure. The cream received at the plants is pasteurized before being manufactured into butter. This is with the object of destroying all detrimental bacteria. Why, then, does not butter sell as 'extra'? The answer is an easy one—the raw product does not reach the plant in a condition which makes possible the manufacture of an extra piece of butter.

"There are two factors which affect the quality of cream and lower its value—care given in the cream station and care given on the farm.

#### Room Must be Sanitary

"A room suitable for handling dairy products should be located on a well drained piece of ground and be at least 50 feet from any stable, barnyard, oil shed, or similar place. The room should be so constructed that it can easily be kept clean. The walls and ceiling should present smooth, hard surfaces. Cement or enamel is ideal. The floor should be smooth and tight, concrete or a hard, smooth good being preferred.

The cream station should be well lighted. It should have one square foot of glass to every five square feet of floor. Sunlight not only acts as a germicide, but enables the operator to easily detect any dirt. Dark rooms are invariably dairy rooms.

Every cream station must have enough equipment adequately to handle the necessary work. The sink or some place in which to wash the milk cans thoroughly is a necessity. This should be kept clean and the water changed at frequent intervals. If a boiler is included in the equipment, the water for washing can best be heated by steam. All utensils can readily be sterilized too. Scales, glassware, a stirring rod, a thermometer, a can rack on which to invert the cans, towels and brushes are necessities in every station.

A dairyman stepping into a properly equipped, clean, neat station usually feels a desire to take better care of his own cream. Particularly is this the case when he sees his neighbor's or perhaps his own cream being poured into a can placed under a placard marked "Second Grade," for if his conscience does not hurt him the 3-cent cut in price because of the poor quality is bound to be noticed.

#### Impresses Dairyman and Consumer

The station operator must remember, that he is the man coming into direct contact with the producer and the impressions received through him have a decided influence on the dairyman. Consequently, in addition to maintaining a sanitary station, he must care for the cream. He must not

only grade it but keep it cool and ship at as frequent intervals as possible. He never should keep cream on hand more than 24 hours.

The consumer forms his ideas of creamery butter largely from the impressions gained from seeing cream in transit or in the cream station. The best advertisements the dairy industry has are its stations. The operator should be sure to call the attention of visitors to his methods of handling cream. Only the good cream is used in manufacturing the first grade butter. The different grades of cream are churned in separate churns and sold at different prices, depending on the quality of the butter manufactured. The tastes of the discriminating consumers are thus safeguarded.

"Profitable dairying means more and better cows, more pounds of butter, and thus greater profits for everyone concerned."

#### CLEANLINESS OF MILK FROM COW TO BUTTER PACK

"Good cows, proper feed and strict cleanliness, are the means by which I prepare my dairy products for a steady market at top prices the year round.

"Cleanliness must be strictly observed from the time the milk is drawn from the udder of the cow until it is delivered to the table of the consumer in the form of butter.

"We first wash the flanks and udder of the cow with a wet cloth. This does away with the practice that many milkers have of moistening their hands either in milk or water, which leads to bacterial contamination.

"The protected milk pails, cans and all the equipment used have been thoroughly washed and disinfected. The hands and clothing of the milkers are also scrupulously clean.

"As soon as possible after milking the milk is placed in large cans in which it is taken to the creamery. In order to get the benefit of the care of the milk up to this time it is essential that cleanliness be observed in the creamery.

"We next run the milk through the separator after which the cream is properly ripened and put into the churn. In handling the butter care is taken that no part of the body or clothing comes in contact with it. When molded and wrapped we are ready to guarantee it as a superior product and will stand back of the guarantee."

#### THE OLD HOME

Madison Cowein

An old lane, an old gate, an old house by a tree;

A wild wood, a wild brook—they will not let me be;

In boyhood I knew them and still they call to me.

Down deep in my heart's core I hear them and my eyes

Through tear-mists behold them beneath the old-time skies,

'Mid bee-boom and rose-bloom and orchard-lands rise.

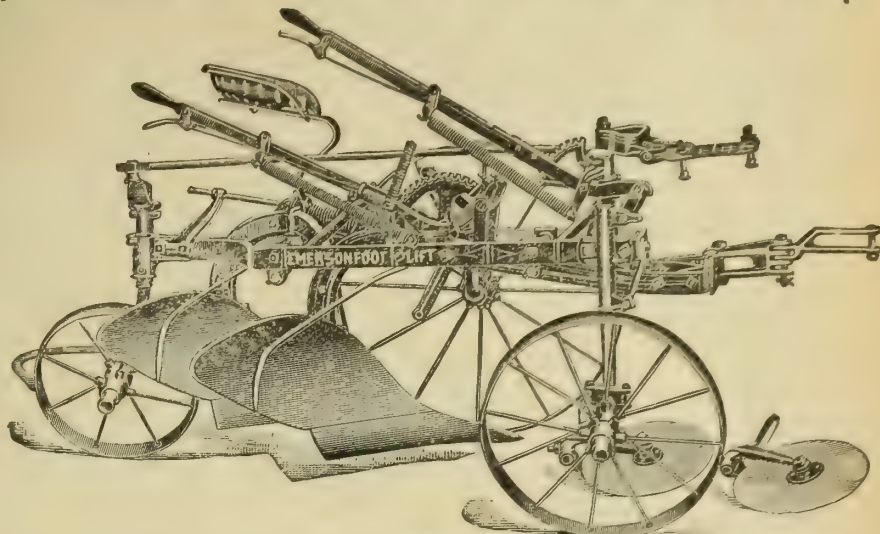
I hear them; and heartsick with longing in my soul,

To walk there, to dream there, beneath the sky's blue bowl;

Around me, within me, and weary world made whole,

To talk with the wild brook of all the long ago;

## Emerson Foot-Lift Plow



The Emerson Foot-Lift Plow

Both levers on the Emerson Foot-Lift Plow are on the right hand side. The powerful high left foot-lift enables the operator to take the Plow from the hardest ground and with the opposite motion push it into the ground. The feet operate the plow leaving the hands free to manage the team. The frame is very strong. The dust proof oil tight wheel bearings insure a light draft and long life, one greasing will do fully 50 acres of plowing. If you are interested in plowing write today for our catalog.

### MILLER-CAHOON COMPANY

Murray, Utah

Idaho Falls, Idaho

To whisper the wood-wind of things we used to know  
When we were old companions, before my heart knew woe.

To walk with the morning and watch its rose unfold;

To drowse with the noontide lulled in its heart of gold;

To lie with the night-time and dream the dreams of old.

To tell to the old trees, and to each listening leaf,

The longing, the yearning, as in my boyhood brief,

The old hope, the old love, would ease me of my grief.

The old lane, the old gate, the old house by the tree,

The wild wood, the wild brook—they will not let me be;

In boyhood I knew them, and still they call to me.

Standing by the entrance of a large estate in the suburbs of Dublin are two huge dogs, carved out of granite. An Englishman going by in a motor car thought he would have some fun with the Irish driver.

"How often, Jack, do they feed those big dogs?"

"Ivry toime they barks, sor," was Jack's reply.

Scant feeding of a young animal produces that which it is all but impossible to overcome by liberal feeding later. The digestive and assimilated organs accustom themselves to

## Sheep Dipping Carsolium

HAS BEEN USED UNDER GOVERNMENT SANCTION FOR MANY YEARS.

### STREVELL-PATERSON HARDWARE CO.

Local Distributors

Salt Lake City, Utah.

### "American" Centrifugal Pumps

Highest class pumping equipment manufactured.

Especially built for irrigation. All sizes from 1 in. up, carried in Salt Lake stock. Send us your specifications.

### Green Machinery and Manufacturing Co.

American Building, 338 South Main St. (First Building North of Post Office) Salt Lake City, Utah

conditions and will not readily respond to new or changed proportions.





Combined with the  
Deseret Farmer and Rocky Mountain Farming  
Established - - - - - 1904

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Lehi, Utah Kirkham Building.  
Our office at Salt Lake City, Utah,  
is at 417 McIntyre Building.



New York Office 5th Ave. Bldg.  
S. E. LEITH, Mgr.

Chicago Office Steger Bldg.  
TOM D. COSTELLO, Mgr.

St. Louis Globe-Dem., Bldg.  
C. A. COUR, Mgr.

Change in Address—When ordering a change in the  
address, subscribers should be sure to give their  
former as well as their present address, otherwise the  
address cannot be changed. This is a matter of im-  
portance to you and to us.

#### OFFICIAL ORGAN

Utah Horticultural Society, Utah State Dairymen's  
Association, Utah State Bee Keepers' Association,  
Bear River Valley Farmers' Protective and Commercial  
Association Agricultural College Extension Depart-  
ment and Utah State Fair Association, Utah-Idaho  
Millers' and Grain Dealers' Association, Utah Fruit  
Growers Association.

#### OUR GUARANTEE

We guarantee every subscriber against loss thru dis-  
honesty or attempted swindle by any advertiser in  
this publication. We do not attempt, however, to  
adjust trifling differences between the subscribers and  
honest responsible advertisers, nor will we pay the  
debts of honest bankrupts. Notice of complaint  
must be sent us within thirty days from date of the  
transaction, and the subscriber must have mentioned  
Utah Farmer when writing the advertiser.

Advertising Rates—The advertising rates will be sent  
upon application.

A good preventative against flies is a clean  
backyard.

There is much greater profit in selling home  
grown feed to the cow than selling on a poor  
market. If the cow is a good one she will pay  
full market price for the hay. She will pay prof-  
it from selling milk, butter and cream. Keep  
records, charge the hay to the cows, and weed  
out those that do not pay. To this must be add-  
ed the profit that comes from having large  
quantities of manure.

Some time ago we promised our readers that  
Dr. Widsote's Weekly Message would be con-  
tinued again. On account of ill health it was  
necessary for him to go away from the state and  
this will explain why we have not been publish-  
ing them.

The harvesting of grain will soon commence—  
in fact, it has commenced in some places. Is  
your machinery all in order? Have you careful-  
ly adjusted all the bolts and parts so that you  
will have no serious trouble when you get into  
the grain field? A few hours spent in looking  
over your harvesting machinery will possibly  
prevent serious breakage or considerable loss of  
time. Go over the machinery very carefully be-  
fore you commence to harvest your crop.

#### PRICE OF HOGS

Late last fall, when everybody was crowding  
their hogs onto the market, the prices went down  
to six cents. During the past month the price

was as high as ten cents, and even now it is with-  
in a small fraction of that price.

We advised our readers in the early spring that  
this would be a good year to raise hogs, and it  
seems to be more than true. It now looks as if  
the prices of corn and other hog feeds will be  
high, and this will help to influence the price of  
your hogs. You should study the market very  
closely, so that you can get the best prices out of  
them.

#### BE CAREFUL ABOUT THE FLY

Because we have been quite successful in re-  
ducing the number of flies, is no reason why we  
should let up in any way our fight against this  
enemy of good health.

Are you watching carefully the breeding  
grounds, garbage can, the manure pile? You owe  
it to your family and to the neighbors to watch  
these things. For flies breed and carry disease-  
breeding filth every day—every minute.

The case is one where eternal vigilance—keep-  
ing everlastingly at it—is the price of safety.  
And five minutes daily exercise may save many  
times that number of dollars in doctor's bills, and  
often in undertaker's bills as well.

#### PLENTY OF PURE WATER

It is a very important thing to have plenty of  
pure water on the farm during the summer time.  
Disease germs multiply during the warm weather  
much more rapidly than they do in colder  
weather. For this reason these germs will be  
more apt to be carried in impure water during  
the summer than during the winter.

If you are so situated that it is necessary to  
use a surface well, it should be well protected  
against the entrance of surface water, and no  
contamination should be allowed to get into it  
from manure pits or cesspools.

Pure water is to be highly prized, and every  
farmer should see to it, and provide plenty of  
pure water during the summer time both for  
domestic purposes and for his livestock.

#### LEARN TO SELL

Every farmer should be a good salesman. For  
a number of years all the different interests that  
have been promoting farming have been  
emphasizing the production side of it. It now  
seems that the time has arrived when the em-  
phasizes should be given to the selling end.

A farm is much like a manufacturing plant. It  
manufactures livestock, grain, hay, sugar beets,  
and other products. The quality of the products  
depends much upon the man who has charge of  
the farm. With the manufacturing plant they  
have a man to take special charge of certain de-  
partments, such as the manufacturing, the adver-  
tising, and the sales. The farmer must take  
charge of all of these.

Farmers are generally good buyers, but they  
are not always good sellers. The farmer has  
only partially completed his work when he pro-  
duces a crop, his profits often depend upon  
whether or not he makes a good sale. More  
attention should be given to the selling and the  
marketing of the crops.

#### BUILD A SILO

The modern silo, well filled, means a good sup-  
ply of feed, whether the weather is wet or dry.  
Corn is the best crop for making ensilage, but  
many other feeds have been used with success.

Many silos are under construction at the present  
time. A great many others are planned to be  
built before harvest time. If you are interested  
in building a silo, and want to know about plans  
and details, don't be afraid to write us, because  
we are in a position to help you. Plenty of good  
feed is an important thing on any farm where  
livestock is kept. The silo is one of the greatest  
helps.

#### WEEDS ON DITCH BANKS

This is the time of the year when some at-  
tention should be given to the weeds growing on  
our ditch banks. They should be cut down or  
destroyed in some way to prevent them from go-  
ing to seed. This is more important on the  
main ditch banks, as these seeds will be carried  
by the irrigation water to the smaller laterals and  
on to the land. The seeds are carried to the  
farmer who is careful and keeps his land free  
from weeds and also to the indifferent one to in-  
crease his loss because of many weeds. Too  
little attention is paid to this important work of  
keeping our ditches free from weeds. It is un-  
fair to the man who tries to keep his farm free  
from weeds and add to the burden of the man  
who is indifferent as to the number of weeds  
he grows.

Sharpen up your cutting machinery. Dull  
knives mean an extra load for the horses and  
some times broken parts. Oil up, for it is a  
poor policy to use too little oil.

#### DON'T BUY SUBSTITUTES

If you are convinced by an advertisement that  
a certain product has merit, and is of value to  
you, you should be fair to the manufacturer of  
that product, and not accept a substitute in its  
place. If a merchant prevails upon you to accept  
of something different, he is unfair to the manu-  
facturer who secured your interest in the first  
place, when he sells you some other product.

In most cases the substitute is of inferior  
quality, upon which the merchant makes a greater  
profit. Don't give your support to such dis-  
honesty, but insist upon getting the article ad-  
vertised. Always remember, that any article  
advertised in the Utah Farmer has our guarantee  
behind it. Be fair to the man who has spent  
his money converting you to a particular article,  
and do not encourage the merchant in the dis-  
honest practice of giving you a substitute.

#### SOME PEOPLE KNOW IT ALL

You often hear the remark, "I do not have  
time to read" or "that doesn't mean me." Many  
subscribers of trade and farm journals do not  
seriously regard the articles they read or do not  
read. Often they think it is meant for the other  
fellow. They try to defend themselves with the  
excuse "lack of time."

We think any farmer who is too busy to read  
one or two farm papers is going backward. Even  
if he stand still others will pass him, and he will  
then find it hard to catch up. Any one who  
thinks he knows it all is really in bad shape.

One of the objects of the Utah Farmer, is to  
publish articles and advertisements that will be  
helpful to you in your work. To get the good  
out of them you must read and study them.  
Answer the advertisement, such as appeal to you,  
for you can secure some valuable help and sug-  
gestions from them. You will find the time well  
spent if you will do more reading.



## RELIABLE FARM BARGAINS

190 acres in Cache valley. Water right for 50 acres. 40-acres of pasture balance all first-class dry-farm land. Short distance from railroad station and schools. Price \$30 per acre. Will consider exchange on this place. This is one of the greatest buys that ever passed through our office.

58 acres near Tremonton, Utah. Good house, barns, other outbuildings, horses, machinery, beautiful trees, water right from Bear river canal, for the extremely low price of \$130 per acre, including everything. Easy terms, with small payment down.

50 acres at Farmington, Utah. 8-room brick house, water piped into the house. Irrigation water for the farm. Good family orchard, large barns and outbuildings. On the main county road. \$11 000. Will consider exchange.

100 acres belonging to the Utah-Idaho Sugar company, near Elwood, for sale at \$115 per acre. 10 years to pay at 10 per cent interest. This property is all plowed and leveled, ditches made, and fenced.

We have several other beautiful farms for sale in the Bear River valley where the land will pay for itself.

We exchange farms for city homes.

KIMBALL & RICHARDS  
"Land Merchants"

56 and 58 So. Main St.  
Salt Lake City Utah.

Phone-Wasatch 963.

## Two Farms For Sale

Situated about 1½ miles east of Springville.

1st. Ostler Farm. Twenty-six and one-fourth acres all under good fence, orchard and farm land. Five room brick house, brick granary and cement cellar. A good spring and flood water right from Hobbie Creek.

2nd. Konold Farm. 93.9 acres—about 50 acres under cultivation balance pasture. About 9 acres orchard, 10 room frame house large barn, stable, sheds, chicken house, pig pen and some farm implements. Water piped in house and corral. Farm has flood water right from Hobbie Creek.

These farms are now leased until December 31, 1916.

Sealed bids will be received until 5 P. M. July 14, 1916.

All bids must be accompanied by certified check of 10 per cent of bid balance to be paid on or before January 15, 1917. Checks will be returned with all rejected bids.

The City Council reserves the right to reject any or all bids.

For further particulars inquire of  
J. L. WHITING, City Recorder  
Springville Utah

## STARS MAKE DOLLARS

If you're a man of energy and business ability, here's an opening worth consideration. There is a great demand for drilled water wells, and there's large sure profits to the man with a

**STAR DRILLING MACHINE**  
Portable—Steam or Gasoline  
Best by test. Low in price, high in practical worth. You can make it pay for itself and earn dividends all the time. Look into this! Sold on payment plan desired.  
Our 10 page catalogue describes 20 different Star Outfits. Write, send \$1 mail you this book which will point the way to money making. Write to-day.  
Star Drilling Machine Co.  
542 Washington St.,  
Akron, O.



## FARMERS KEEP YOUR ACCOUNTS

(Continued from page 3)

this spring and should be in your books are: Feed Grinding, Baleing Hay, and All Machine Work Hired. The other items of expense should be entered as they are paid later on in the year.

Breeding Fees, paid out for breeding mares, cows, sows, ewes, etc. Veterinary Expenses for Horse Medicine, personal services, of Veterinarian, etc.; Spray Material, i. e., Arsenate of Lead for trees, or spray materials for sugar beets, alfalfa, chicken coops, hog pens, etc.; Fertilizer, i. e. Manure bought, commercial fertilizers, etc., bought; all these items should be entered on page 24.

Seeds and Nursery Stock bought should be entered on page 25 giving the date, item, and amount in dollars and cents of purchase. Seed is a very important item of expense on most farms each spring because of the variety purchased. Some of the more common seeds bought are: Sugar Beet Seed, Potato Seed, Wheat Seed, Oat Seed, Barley Seed, Alfalfa Seed, Clover Seed, Timothy Seed, etc. All expenses for these and other unmentioned Seeds and all Nursery Stock bought since January 1st, should be entered on page 25. In case you raise your own seed and do not buy it then do not enter it in here as a farm expense.

Your Insurance; on buildings, crops, livestock, etc.; Taxes, Cash Rent, Pasture Bill, Forest Reserve Fees and Livestock Association Fees should be entered on page 26. If your charge for Insurance covers more than one year, enter only the amount that should be figured for 1 year. Be sure and itemize these expenses carefully and wherever possible give the date of payment.

Stock Bought is a very important item of expense on most of your farms and is one of which detailed record should be made on page 27. Give date stock was purchased and where possible under "Item" give a description of animals, their names, etc., where only a few are bought, and always give the number bought and average price paid per head where they are bought by flocks or herds. The most important part of a record of this kind however, is always the total number bought and the dollars expended.

Miscellaneous Expenses should include all Farm Expenses which are not taken into special account in the pages of your Record Book previous to pages 28 and 29, where all miscellaneous items should be entered.

Your County Agricultural Agent will be pleased to assist you with any part of your Farm Accounts which you do not understand. He will take much pleasure in assisting you, when you need him, to enter your Farm Receipts and your Farm Expenses in your Account Book so that you will be enabled to study your Farm as a Business.

You farmers should get together in groups and ask him over to explain your accounts to you, and to explain to you how to keep this simple and effective record of your farm business and you will see that he will respond to your call most heartily.

A very large portion of our soils need to be put back into the humus condition they were in originally.

## DISPOSAL OF DEAD ANIMALS.

Burying or Burning All Carcasses Will Reduce Spread of Infectious Diseases.

Often when animals die on the farm no disposal is made of their carcasses other than to drag them into a field or a near-by woods, where they are left on the surface of the ground to decompose or to be eaten by buzzards, crows, dogs, and other scavengers, or animals which feed on carrion.

This practice can not be too severely condemned, because it contributes seriously to the dissemination of disease germs and the perpetuation of infectious diseases.

The carcasses of animals which have succumbed to infectious diseases like anthrax, hog cholera, blackleg, tuberculosis, etc., are charged with myriads of virulent disease germs, and just as long as they remain where scavengers can reach them and portions of them can be carried away promiscuously, they are a dangerous menace over a large territory to all animals which are liable to be attacked by disease germs. Even carcasses of animals which have died from other causes than infectious diseases, unless they are disposed of in a proper way, are a source of danger. Left on the surface of the ground their odor soon invites scavengers to congregate and to bring with them the infectious material with which they may have become contaminated by eating carrion elsewhere.

Dead animals on the farm should be buried deep enough to prevent them from being dug up again, or they should be burned. To burn large carcasses like those of dead horses and cattle is difficult and laborious and requires a large quantity of fuel. In most instances it is more economical to bury them. All animals which have died of infectious diseases and are buried should be covered with a heavy layer of lime before the graves are closed.

In the winter, when the ground is frozen, it is more difficult to dig graves than at other seasons of the year, but it is just in cold weather that disease germs remain alive and virulent longest in dead organic matter and that scavengers travel the longest distances, have the best appetites, and are most likely to carry disease germs on and in their bodies. The extra trouble of digging graves in the winter is easily offset by the greater danger it counteracts. Low temperature prevents the multiplication of disease germs, but many kinds of disease germs are not killed or deprived of their pernicious possibilities by exposure to a lower temperature than the lowest reached during an icy, arctic winter.

Everywhere farmers not only should attend to the proper and safe disposal of the bodies of their own animals which unfortunately die, but they should insist on the proper disposal of the bodies of all animals which die anywhere in the regions in which their farms are located.

A son of Erin was digging post holes one day when the boss rambled along to size up the job.

"Do you think you will ever be able to get all that dirt back in the hole again?" jokingly asked the boss.

"No, sor," came the rapid reply of Pat, "not as it is now, sor; but it's me intintion to dig the hole a little daper."

## THE USE OF



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## CAN FRUIT AT HOME



## LIVE STOCK

### CATTLE FEEDS WASTED

**Farm Products That Might Go to the Economical Production of Meat Now Put to Less Profitable Uses.**

A vast quantity of feed available for cattle is now either wasted absolutely or put to some less profitable use. Failure to utilize the full value of this material has increased unnecessarily the cost of producing meat, has diminished the profits from cattle feeding, and has discouraged many farmers from engaging in an industry essential to their permanent prosperity.

The loss in grain straw and corn stover amounts to more than \$100,000,000 annually. Both of these products are disposed of most economically when fed to cattle in connection with some form of concentrated feed. Straw is especially valuable in carrying the breeding-herd through the winter, in wintering stockers, and as a supplementary roughage for fattening cattle. Stover, too, is an excellent feed for wintering cattle, especially mature breeding cows. Nevertheless, in many sections of the country where these products are abundant, little attempt is made to take advantage of their value for these purposes.

Of an annual straw crop of approximately 120,000,000 tons, it is estimated that only two-thirds is put to its best use—live stock production. Of the remainder a little more than one-half is sold or turned under and the rest—15 per cent of the total crop—is burned. Burning is practically an absolute waste and although plowing under does contribute something to soil fertility, the benefit to the land is less than that which would be derived from the use of the straw to produce manure. "Of all systems of obtaining permanent soil fertility, none is so practical or as easily available as that of feeding live stock."

The average value of all kinds of straw is placed at about \$5 a ton. In many sections, of course, no such price can be realized for it, and as a matter of fact only about 8 per cent of the crop actually is sold. The figure mentioned, however, may be taken as representing the value to the farmer of straw if he will use it properly in his farming operations as feed or bedding. In order to illustrate how this may be done we give three sample rations for wintering a breeding herd of beef cattle on straw combined with silage, shock corn, and cottonseed or linseed meal. Any one of these rations, it is said, will prove economical. They are as follows:

#### Rations for Wintering Breeding Cows.

##### Ration 1

	Pounds.
Straw	10
Silage	20
Cottonseed meal or linseed meal	1½

##### Ration 2.

Straw	20
Cottonseed cake or oil cake	2

##### Ration 3.

Straw	10
Shock corn	10
Cottonseed meal	1

In this connection it is pointed out also that feeding straw in the winter will insure under certain circumstances the full utilization of summer grass. In a number of western States it frequently happens that

grass goes to waste because feeders are unwilling to pay the high prices asked for steers in the spring. With an abundance of straw on hand to lessen the cost of wintering, feeders can take advantage of the lower prices for stocker cattle in the fall to secure on reasonable terms at that time enough stock to pasture all the grass the following year.

The production of corn stover is about twice that of grain straw, amounting to approximately 245,000,000 tons a year. A larger percentage—81.5—of this is fed than of the straw, but the waste is never-the-less astonishing. For this, poor methods of feeding are largely responsible. By far the most economical method of handling corn is by ensiling, but as a matter of fact only, 8.1 per cent of the acreage was put in the silo in 1914, the year in which these investigations were made. About 11 per cent was cut for green feed and 81 per cent allowed to mature for grain. It is in the last portion of the acreage that the greatest waste occurs. Stripping the leaves from the stalks which are subsequently burned, removing the stalk above the top ear only, leaving the stalks to stand in the field until the loss of leaves and leaching have removed much of their fertilizing value, are all unthrifty methods. Furthermore, almost four per cent of the stover is burned, as though, instead of being a potential source of revenue, it was merely a nuisance to be gotten rid of as a preliminary to plowing. In some States the percentage of stover that is thus thrown away is as high as 7 or 8 per cent and the total loss to the country from the practice is estimated at nearly \$15,000,000 a year.

To obtain satisfactory results from the feeding of farm roughages such as straw and stover, they must be combined with some form of concentrated feed. At the present time large quantities of such feed, in the form of cottonseed meal and cake, corn, molasses, peanuts and beans are exported for the use of European feeders. If the straw and stover that are now wasted were employed to feed more cattle, these concentrates could be consumed at home. The result would be a tremendous saving not only in the cost of producing beef, but in the cost of enriching the soil as well. In 1914, for example, about 1,000,000 tons of cottonseed meal—half the total production—were applied directly to the soil as fertilizer. If this had been fed to cattle instead, three-quarters of the fertilizing value would have been returned to the soil as manure. The loss of the other fourth would have been far more than counterbalanced by the profit on the meat produced economically by the meal and the necessary roughages. Much the same thing is true of the other oil meals.

The value of these meals is far better appreciated in Europe than here. Denmark, for example, feeds annually 478 pounds of oil cake to each of her mature cattle. The United States approximately 24 pounds. Furthermore, the European feeder is aware of the fact that the high-protein meal, while more expensive to buy, is more economical to use. Meal of this

quality is seldom sold on the domestic markets because the American farmer has not yet learned its value. Cottonseed and linseed are perhaps the best known of the oil meals but there are others the use of which as feed could be profitably extended.

### RATIONS FOR FATTENING HOGS

Alex Lofgreen.

Much will be saved if the swine are in good flesh at the beginning of the fattening period. It will take less feed and better gains will be made if the hogs can be pastured until they are in good flesh before they are put up and given the heavy grain ration. This has been demonstrated so often by feeders that it is not necessary to argue the question.

The pea field, the oat field or the corn field generally will furnish considerable grazing. If peas were planted in the corn at laying-by time the corn field will afford excellent grazing with the ears left in the field, perhaps enough to fit the porkers for the fattening ration.

For the finishing it is advisable generally to put the hogs in a clean dry pen where they may have shelter. It is not economy to let the animals run in a pasture during the finishing period, as they fatten faster when confined in close pens. They will need plenty of water and clean, wholesome surroundings.

On the basis of 1,000 pounds live-weight the hog uses about 275 pounds of dry food, the sheep 160, the steer 125 per week. The hog will digest about 230 pounds, the sheep 120 and the steer but 88 pounds. To secure 100 pounds of increase, as a rule, it requires 1,000 pounds of dry feed for the steer, 910 pounds for the sheep and 420 pounds for the hog. From this comparison it will be seen that while the hog eats more heartily it consumes more food and produces more gain from the feed than either the steer or the sheep.

But we must remember that there is economy in feeding hogs up to a certain weight. For instance, a pig of the proper age and weighing 100 will require less than 300 pounds of feed to produce 100 pounds of increase, whereas a hog weighing 300 pounds will require on the average 500 pounds of feed to produce 100 pounds of gain. The best range of economical feeding is between 175 and 250 pounds, depending of course up on the price of hogs and the value of feed.

Corn alone does not supply an economical fattening ration because it does not contain enough protein. Even when the fattening period is short a protein supplement such as wheat shorts, meat meal, etc., should be given.

For good bacon it is highly desirable that the hogs be pastured previous to fattening so that the animals will be well developed. The legumes such as alfalfa, clover, peas, soy beans, are very fine grazing crops because they are rich in protein.

Care should be taken to feed all the animals will eat clean without leaving the feed. They should have just enough and no more. By using care in feeding one can soon determine how much to give at one feed. This is an important consideration in feeding economically. At the beginning of the feeding the hogs will require from 40 to 50 pounds of dry matter to 100 pounds liveweight. The



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amount will diminish to from 25 to 30 pounds as the fattening period advances. The porkers should be watched very closely, fed just what they will eat and no more; plenty of water supplied.

It must be remembered that some animals lay on flesh much more economically than others. A bushel of corn will produce more pork when fed to one animal than another. This is why it is important to select the feeding type and to reject the type that is not economical feeders.

In fattening it is well to know when it is economical to stop feeding and slaughter or market the animals. It will be clearly seen that to feed longer than is necessary to finish the swine will not be good economy. Experience only can guide one right in determining the time to market or slaughter. In general it may be said that when the animal is "filled out" well, "blocky" and "plump", it is finished.



**SCOURS IN YOUNG PIGS**

L. A. Weaver, Missouri A. C.

Cure scours by finding and removing the cause of the trouble. If the pigs are kept free from scours and thumps they have escaped the most common trouble of the pig pen. The ailment is really a symptom of indigestion caused by

1. Changing the feed of sow,
2. Too much feed,
3. Dirty pens and troughs, or
4. Chilling the sow or pigs in cold rain or winds.

Changing the feed of either sow or pigs from sweet to sour milk will often cause scours, and so will the improper use of feeds like bloodmeal, tankage, and oil meal which contain more protein than the other feeds which the animal has been eating. It is usually well to feed both sow and pigs all they will eat, but if this should result in stimulating the milk flow so that the youngsters get more than they can digest, scours will result, and the sow's feed must be cut down.

Clean, dry quarters and clean troughs will do much to prevent scours by preventing the pigs from swallowing filth which contains germs which multiply in the stomach and intestines and cause digestive trouble. If the sows have been wading through mud and filth before being suckled by the pigs, the same results are likely to follow, so they should all be kept in clean dry lots where the sun has a chance to get in and kill the germs, and good ventilation makes the air pure and helps to keep the floors and lots so dry that any germs that are present are less likely to be taken by the young pig when it sucks or eats. This can be arranged by opening up trap doors in the roofs of these sheds during warm sunny days, and closing them when the cool nights make protection necessary, or rains threaten to come in through the open doors and chill the sows and pigs or soak their beds.

If scours appear in spite of all precautions, the following treatment has proved valuable to the Missouri Agricultural Experiment Station. Reduce the sow's feed, clean up more thoroughly than before, and give the sow a tablespoonful of sulphur in each feed for several days. It is also well to give the sow a good dose of Epsom salts. If practicable, each pig may be given a teaspoonful of castor oil or Epsom salts, and charcoal should be provided in any convenient way. If no cheaper charcoal can be secured, it can be supplied by starting fires of cobs, and then putting the fires out before they burn out.

Thumps in young pigs result from too much feed, or too little sunshine or exercise, or both. The remedy is to reduce the sow's feed and compel the pigs to take plenty of exercise in the open air and sunshine. This treatment is only effective for pigs that have not been weaned, since thumps in older pigs is usually caused by trouble in the lungs or bronchial tubes.

**WIRE CUTS**

The season of the year is approaching when horses will be annoyed considerably by flies. While fighting the flies they are often cut in the barbed wire. Where animals are cut, especially about the limbs, they require immediate attention. Unless they are attended to, blemished, unsound limbs usually result depreciat-

ing the animal from  $\frac{1}{4}$  to  $\frac{3}{4}$  its value. By proper and immediate attention wire cuts of this kind can usually be cured leaving only a slight blemish. After an animal is cut the wound should be cleansed with a good disinfectant. 2 per cent solution of carbolic acid or creolin in water should be used. The ragged edges and the hair hanging in the wound should be trimmed away and the affected parts kept clean and powdered over with equal parts of boric acid and tannic acid together with  $\frac{1}{4}$  of iodoform. In many cases it is well to bandage wounds of this kind especially on the limbs. After the wound has been washed it should be wrapped in absorbant cotton and bound with a roller bandage. This insures absolute cleanliness by the cotton taking up all secretions. When treated in this manner it should be dressed daily otherwise do not use a bandage. If the wound is clean a dry dressing is preferable. It is not well to irritate it too often by dressing. Aim to assist nature. It heals the wound.

**SKIM MILK**

Skim milk is one of the most important products of the farm if fed in proper quantities. There is no better system regulator on the market not excepting wheat or bran. Constipation vanishes when it is fed in sufficient quantity and all bowel complaints are bettered. It has about the same effect on pigs and chickens as oats has on horses.

Practically all the protein of the flesh building part of the whole milk is left in the skim milk. This protein is necessary in every ration especially in the feeding of young stock. Considered from the standpoint of fertilizing and feeding, protein is the most expensive portion of the milk. When you purchase milk and other expensive feeds the price paid depends upon the amount of protein they contain. If pigs have been fed on corn for a long time until they have lost their appetite for it, skim milk, even if fed in only small quantities will help very much in remedying this condition.

**LET THE TEAM PULL TOGETHER**  
A. J. Meyer.

The average farmer is ready to co-operate with his town brethren but he wants to co-operate in his own way and in something that he can clearly see is to his interest. A study of what has been termed co-operation as it has existed for many years between town and country people generally shows that the town has developed the plan and presented it to the farmer full-formed. A better way to co-operate would be for the town and the country to get together. Let both indicate what they want in the way of co-operation; then together work out the problem—not in any patronizing way but in a substantial business-like manner as between partners with a common interest.

Full and free co-operation between town and country to the mutual benefit of both is not impossible but if it ever is accomplished it may have to be at the sacrifice of some of the artificial machinery which thrives in towns unnecessary to the economic scheme yet capable of gaining and keeping a foot-hold. The occasional "farmers' day" in the city is a very desirable thing and these events should be encouraged. An occasional city men's day in the country might not be a bad innovation but the per-

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Wild Animals at Home—E. Thompson Seton. 50c. By mail 60c.

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manent solution of the problem of co-operation between town and country is not found in the occasional special event which brings the two groups of men together. Real co-operation must be continuous and must be of a kind which directly affects the farmer's prosperity and leaves more money in his pocket at the end of the year. When the farmers in any territory are able to put their business on a basis which will earn 8 per cent instead of 4 per cent the producing department will need a good purchasing department and an even more elaborate sales department, which is another way of saying that the prosperous farmer will make a prosperous town.

**WHAT KIND OF CAR?**

"In considering the purchase of an automobile it is a good rule to figure out in advance all the prospective requirements to be placed on the car," says an expert. "Is the car to be used for business purposes, for pleasure, for every day trips around town, for touring, or to meet different needs?"

"Then, the man who is about to invest in a car should consider the question of who is to drive it—whether he is going to be the driver, his wife or other member of the family or a chauffeur. By putting these things down on paper and 'striking an average,' as it were, there ought to be no mistake in selecting the car best suited to perform the

service which will be required.

"In connection with every purchase, no matter what conditions are to be met, there is another fundamental consideration, and that is simplicity. Its importance cannot be too strongly emphasized, especially if the buyer knows little or nothing about things mechanical and does not propose to employ an expert to look after the car.

"If you are going to drive the car yourself you want the car which is the easiest to operate, a car simple in design and construction, easy to understand and easy to take care of. Unnecessary complications can always be criticized, even when an expert mechanic is in charge.

"There is a growing recognition of the value of simplicity as an automobile element, for the reasons indicated in the foregoing. Besides, the prudent investor in a motor car appreciates that by the elimination of unnecessary parts there is going to be a large saving in the cost of operation—in the gasoline, tire and repair bills."—Rider and Driver.

You may save the life of a good cow or horse by taking a little trip down to the barn just before bedtime. Anyhow, you will sleep the better for making the round of the stables at that time.

It's all right to ride a hobby if you know when to dismount.—Farm Journal.





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## THE HOME

### THE THREE "C'S" OF CARING FOR MILK IN THE HOME

The three "C's" for the proper care of milk in the home, according to the dairy specialists of the U. S. Department of Agriculture, are:

Keep milk Clean  
Cold  
Covered

Milk is a highly perishable food and the length of time it will remain sweet and safe, especially for children, depends, almost entirely upon the constant care it receives from cow to consumer. Milk passes through three agencies the producer, the dealer, and the consumer. If the first two have done their part, clean, safe milk will be delivered, thoroughly chilled, to the consumer. The consumer's responsibility begins the moment the milk is delivered at his doorstep.

Because milk poured from vessel to vessel on the street is very liable to contamination from dust, manure particles and germs, milk is best delivered in capped bottles. If bottled milk can not be obtained, the housewife should try to have someone in the family receive the milk in a clean, scalded utensil, cover it instantly, and put it without delay into the refrigerator, or the coldest available place. Under no circumstance should an uncovered pitcher, bowl or pan be left out on the porch to receive bulk milk. The vessel, both before and after the milk is poured into it, is accessible to flies and collects particles of dust and dirt.

Even in the case of bottled milk, however, the consumer must see that the bottle is not left out in the heat for a moment longer than is necessary. Milk should be delivered and kept at a temperature of 50 degrees F. or lower—the colder the better. At such temperatures bacteria develop very slowly and milk undergoes little change until consumed. A slight rise in temperature above this point, however, permits bacteria to multiply rapidly and brings about rapid deterioration of the milk, which may render it unfit for ordinary use and make it highly dangerous for babies and little children. For this reason bottled or other milk should not be allowed to remain in a warm place, or on a sunny porch or warm place, not a moment longer than is necessary.

#### Delivery of Milk in Hot Weather

In hot weather the best plan is to have the milkman put the milk directly into the refrigerator, because at that time of year milk can not be kept properly without ice. If a refrigerator is not available, provide a small box containing ice, and if ice is unobtainable, provide some tight container with insulated walls that keep the heat from getting rapidly to the cold milk. A homemade fireless cooker is admirable for this purpose, especially if partially filled with ice. In the absence of any of these devices, arrange with the milkman not to leave the milk in the sunlight, but to put it in the coolest, shadiest place around the house.

#### Handling Milk in the Home.

In handling milk around the home, do not pour it from one vessel to another until it is to be consumed. Do not let the bottle of milk remain out of the refrigerator a moment longer

than is necessary. Keep the milk covered, using paper caps or an inverted tumbler on bottles, or storing it in covered utensils. Any household utensil that is to be used as a vessel for keeping milk should first be cleaned thoroughly and scalded.

Before opening a bottle of milk, wash and wipe the neck and outside of the cap with water and a clean cloth. The little depression on the top of the cap may collect dust or water and any milk that leaks out may attract flies. Lift out the cap with a pointed instrument, so that the outside of the cap, which may be contaminated, will not be pushed down into the milk. Each time the milk is to be poured from the bottle it is a wise precaution to wash the neck as described.

#### Milk in a Refrigerator.

The refrigerator where milk is stored should be cleaned regularly, especial care being given to keeping the drip pipe free and clean. The ice rack also should be cleaned and any place where food is kept or milk stored should be scalded occasionally with sal-soda solution. The refrigerator, even though cold, may quickly be contaminated by a few drops of spilled milk, or by small particles of food. No matter how clean the refrigerator, milk should never be kept in an open vessel. As milk absorbs odors easily, such foods as fish, cabbage, or onions should not be kept in proximity to it.

#### Clean Empty Bottles.

As soon as milk bottle is emptied, rinse it thoroughly with cold water. Do not return dirty bottles and do not use milk bottles except to hold milk. Returning dirty bottles to the milkman may mean that a few days later either you or your neighbors will get contaminated milk. Milk bottles should never be taken into a sick room. In case of infectious or contagious disease, all bottles should be boiled thoroughly and should not be returned to the dealer without the express permission of the attending physician. Such diseases easily can be made epidemic through disregard of this precaution.

#### Where There Are Children.

Care of milk, important for all, is a vital necessity in a home where there are children. It is absolutely essential to the safety of babies. No intelligent mother will leave to an ordinary servant the task of caring for or preparing the milk for her baby. Mothers of small children should get, from their own physicians, explicit directions for the proper handling of milk and for cleaning and sterilizing nursing bottles. Pamphlets on infant feeding may be obtained from the municipal milk stations or health officers. Milk for babies can not be kept too cold, and too much care can not be given to keeping it clean and covered.

#### SOFT GINGER BREAD

One cup molasses, 2 level teaspoons soda, 1 cup cream or  $\frac{1}{2}$  cup soft butter or lard and fill cup with boiling water, 1 beaten egg, a pinch of salt, 1 small teaspoon ginger and 2 heaping cups sifted flour. Beat smooth, but not too much, as that lightens the color. Bake in moderate oven.



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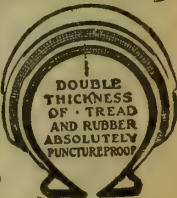
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33x4 in. 15.75	37x4 1/2 in. 23.60
34x4 in. 16.70	37x5 in. 26.30

All other sizes not included in above list also furnished. Non-skids at 10% additional. Terms: Payment with order at above special prices, a 10% discount allowed on orders for two or more tires. All personal checks must be certified.

Try these tires now and be convinced of their very high qualities. Solid right to the consumer only. Describe folder upon request. Write for it.  
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It would not be if you had used

## MICA AXLE GREASE

Gives long life to your wagon. The mica makes a smooth bearing surface—prevents friction and wear.

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**Improved Powers Combined Well Boring and Drilling Machine**

Same rig bores through a soil at rate of 100 ft. in 10 hours, and drills through rock. One man hauls and operates machine. Engine power if wanted. Easy to operate—no experts needed.

**Small investment; easy terms. Make machine pay for itself in a few weeks work.**

There is big demand for wells to water stock and for irrigation. Write for free illustrated circulars showing different styles.

**Lisle Manufacturing Co.**  
Box 978 Clarinda, Iowa



# MIXED FRUIT RECIPES

Excellent Jelly, Marmalade, and Fruit Paste Prepared from Combination of Cranberries and Apples.

It is often a decided advantage to the housekeeper to make jelly out of a combination of fruits—sometimes because the combined flavor may be preferable to either alone and sometimes because it may be more economical, as, for instance, when she has too little of either fruit to use for this purpose, or, to cite another instance, when she wishes to extend the flavor of some special fruit as quince through a considerable amount of material less highly flavored, as apple. Sometimes, too, there is an advantage in both flavor and color, as when cranberry is combined with mild-flavored apples.

An excellent combination for home-made jelly, according to the home economics experts of the department who have been studying the uses of different fruits, is cranberry with apple. Equal quantities of cranberries and of apples cut up into small pieces should be just covered with water and boiled until the fruit is soft. Strain the juice through cheese cloth. Add to the pulp the same amount of water as at first, boil the pulp a second time, strain as before, and combine the two lots of juice. Add three-fourths as much sugar by measure to the juice, and boil again. The jelly is done when a few drops taken up with a mixing spoon will flake on the spoon as it cools instead of dropping off of it. Pour the jelly into glasses which have just been sterilized in boiling water and thoroughly drained. Seal the glasses in the ordinary way.

The pulp which remains after the juice has been drained off for jelly can be used to make excellent "marmalade" or "fruit cheese," as old-time housekeepers called it. The pulp should be passed through a sieve, an equal weight of sugar added to it, and boiled until it is thick and firm. It must be stirred frequently so that it will not burn. The thick marmalade should be poured into freshly scalded glasses or jars. While the color is not quite so good as jelly, the flavor is distinctive and good, and such "fruit cheese" is delicious when spread on bread and butter or when used for filling bread-and-butter sandwiches. If less sugar is added in making marmalade, it can be used in place of fresh or dried apples for Brown Betty and similar fruit puddings.

A fruit paste somewhat similar to marmalade is well known in the Orient, and tests have shown that cranberry and apple make a paste of excellent flavor and that it can be readily made at home. Cook the pulp which remains from jelly making, with three-fourths of its weight of sugar, until it is very thick (about three-quarters of an hour), stirring constantly. For each pound of fruit it is the oriental custom to stir in one-fourth of a pound of finely cut nuts (usually almonds, though pecans, walnuts, and other nuts may be used at the housekeeper's convenience) and a little powdered cinnamon just before the kettle is taken from the fire. However, either nuts or cinnamon, or both, may be omitted, according to taste and preference. Spread the paste in buttered tins in a layer about one-half inch thick, and set aside to cool and become firm. Then cut into squares or diamonds, spread the pieces on tin plates, and dry out in a warm (but not

hot) oven for a few hours. When the paste is dry enough not to stick, pack it away in tin or other airtight boxes, putting paraffined paper between the layers. The pieces of paste may be dusted with powdered sugar to keep them from sticking if one prefers.

Such fruit pastes are also very fine when made with quince alone or with quince and apple, or with cranberry and quince.

Fruit paste is not so easy to make as marmalade, but is a very palatable and wholesome sweet. One or two pieces of it will please the children for dessert or in the lunch box, while grown-ups will enjoy it as they do crystallized or candied fruit. It is worth while for the housekeeper who likes to economize in labor to remember that the paste keeps well and that not much more labor is required to make a large than a small quantity.

## APPLE SAUCE CAKE

Cream  $\frac{1}{2}$  cup butter, 1 cup sugar, a little salt,  $\frac{1}{2}$  teaspoons each cloves and nutmeg, 1 teaspoon cinnamon and 1 cup raisins, dissolve 1 teaspoon soda in a little warm water, stir it into 1 cup sour apple sauce letting it foam over the other ingredients. Beat all thoroughly, add  $1\frac{3}{4}$  cups flour and bake in loaf about  $\frac{3}{4}$  of an hour.

## CREAM CAKE

One cup sugar, 1 tablespoon butter, 1 egg, beat these together, then add 1 cup milk,  $1\frac{1}{2}$  cups flour,  $1\frac{1}{2}$  teaspoons baking powder in flour, then add flavoring, bake in layer tins.

Chocolate Filling—Two large table spoons cocoa or grated chocolate, butter size of egg. Melt these together, then add 3 tablespoons cold coffee and enough powdered sugar to thicken. This is a never fail frosting; for a larger cake increase accordingly.

## FRUIT CAKE

Two cups dark sugar 2-3 cup meat grease, 4 eggs, 1 cup butter milk, 2 teaspoons soda, 1 cup raisins, 1 teaspoon cloves, 1 teaspoon cinnamon, 1 teaspoon nutmeg, 3 cups flour, cook the raisins, then sprinkle them good with flour, and stir in cake just before putting it in pans. This makes a big cake of four layers.

## TOMATO SOUP

As tomatoes will soon be ripe, I will send a recipe for tomato soup. The first time I made this soup I thought that it was the best soup I had ever eaten.

Twelve large tomatoes, one small onion, 2 quarts rich, sweet milk, one cupful oyster crackers, rolled fine, one spoonful soda,  $\frac{1}{2}$  cupful butter, pare and cut fine the tomatoes and onions, let them boil one hour, take off the fire and put in the soda, then the butter and milk, stirring well. Return to the fire and add the crackers, salt and pepper. Boil up once or twice and serve in winter; use two quarts of tomatoes, boiling a half hour. This soup is excellent.

## CORN STARCH IN CATSUP

When making tomato catsup instead of boiling a long time to thicken by evaporation try this. After adding spices and all seasoning boil a short time, then dissolve a small quantity of corn starch in a little cold water and add to it. By so doing the catsup is thick enough while still a bright red color and has not the strong taste caused from long boiling.



# MUTUAL CONFIDENCE

Telephone service enters more intimately into the lives of the public than does any other utility, for it affects, in a greater or lesser degree, practically every form of human activity. We cannot afford to pursue any course which, upon analysis, would prove to be contrary to the best interests of the public and a consequent betrayal of public confidence.

This condition imposes upon us grave responsibilities, which we cheerfully recognize and which we undertake at all times to discharge in a manner that will merit public favor. Therefore, we shape our policies and build our rates to conform to the best thought developed in the telephone business up to the present day.

By pursuing such a course we believe we will always merit the confidence of the people we serve.

Our entire PLANT which affords facilities for intercommunication in the cities, towns and rural districts of seven states, is built upon confidence. Confidence in the industrial and commercial future of the territory which our system covers; confidence in the fairness of the people we serve and confidence in our ability to serve the public well. Our entire BUSINESS is built upon confidence. Confidence which the public has in our corporate character; confidence in the integrity of our policies and confidence in our ability to render efficient service.

The Mountain States Telephone and Telegraph Co.

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The one great convincing engine value. Fairbanks-Morse quality—service—dependability—at a popular price, tells the story.

**More Than Rated Power and a Wonder At The Price**

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**1<sup>1</sup>/<sub>2</sub> H. P.**

On Skids **3 H. P. \$66**  
**BUILT-IN 6 H. P. \$119**  
**MAGNETO All F. O. B. Factory**

*Effective April 20, 1916*

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Simple—Light Weight—Substantial—Fool-proof Construction—Gun Barrel Cylinder Bore—Leak-proof Compression—Complete with Built-in Magneto. Quick starting even in cold weather. Low first cost—low fuel cost—low maintenance cost. Long, efficient, economical "power service."

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Go to your local dealer. See the "Z." Compare it on merit—by any standard—point by point. You'll sell yourself on this wonderful engine value.

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All Fairbanks-Morse dealers sell "Z" engines on a zone carload low freight basis. If you don't know the local dealer write us.

**Important Dealer Service:** When you buy an engine from your dealer you deal with a local representative of the Manufacturers. He shares their responsibility. He stands behind the engine he sells. He's responsible to you. He's at your service to see that you are satisfied. And he's as near you as your telephone any time you want him.

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 NORTHERN HOTEL CO., PROP.  
 FRANK L. CRAMPTON, MGR.  
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## Dry-Farm Crops

Agricultural Lesson.

Prof. J. C. Hogenson.

### Fall Wheat

Wheat has always been, and perhaps always will be, the principal crop grown on dry lands. This being the case, the advantage of raising a variety fully suited to the conditions under which we wish to grow it, is obvious. If one variety of wheat withstands drought better than another, if it produces more wheat to the acre, if it is of as good or better quality, if it resists diseases better than another, if a greater variety of products of as good or better quality can be made from it; that is the variety one ought to grow.

The fall wheat which has given the best yields of good quality wheat is the Turkey Red Wheat. It is a red wheat of medium hardness, is bearded, does not shell badly and stands drought and disease well. Its milling quality is high, being considered the standard milling wheat of the middle Northwest.

### Oats.

Oats have not been considered as among the promising dry farm crops, until quite recently. The spring oats should be sown about the middle of April, when the grain is about three inches high it is a good practice to give the ground a thorough harrowing both ways to loosen the crust and help the crop to stool and also to conserve moisture.

### Barley

For a spring barley the experimental farms have found California, California Prolific, and Success about of equal value. The seed is sown in the first part of April at the rate of one bushel per acre. The yield has been from twenty-four to forty bushels per acre.

A fall variety has been found which it is hoped will greatly increase the yield per acre. It is claimed by those who have grown it that it yields much better than do the spring varieties. Like fall wheat, this variety is sown in the fall of the year and this gets the full benefit of the winter rains and snows.

### Rye.

A fall variety of rye is best for arid farming. It is a good drought resisting crop, but at its best does not run high in yield. It is a sure crop, but should be cut for forage rather than for grain.

### Corn.

The growing of corn on dry lands has been practiced for a number of years. It permits of intertillage and is therefore a moisture saving crop. It is not a sure crop to grow for grain in all sections of the state owing to our short seasons, yet it is always a reasonably sure forage crop. Considering corn and stover together, the yields of corn on dry land in the state are exceptionally good and indicate that corn should be grown on dry land in rotation. The yields range from twenty-six to fourteen bushels of corn and 9125 pounds to 1257 pounds of stover per acre.

The corn on dry land should be planted about three feet apart in check rows, and level cultivation practiced so as to admit cultivation in various directions, about four kernels has proven best to each hill.

### Alfalfa.

Alfalfa is considered a good dry farm crop on the experimental farms.

There has been no apparent difference in the yield or value of the native Turkestan. Eight pounds per acre, sown with a press drill in April seems to give the best results. It is a good practice to disk alfalfa over two years old in the spring as it thickens the stand and forms a mulch which conserves moisture. It also destroys weeds and grasshoppers eggs. If the alfalfa is left for hay it should be cut as soon as about one tenth of the blossoms begin to appear, as the hay is of more value at that time. For seed it has been found a good practice to cut the first crop when about six inches high and leave it on the ground, then allow to grow for seed. This shades the ground and prevents evaporation. Another good way of raising alfalfa seed on dry farms is to plant the seed in rows about 28 inches apart and after the plants are up, thin them to stand about six inches in the row. This has the advantage of allowing cultivation, thus conserving moisture. You will have noticed that the plants near the edges of a field of dry alfalfa are green and continue to grow long after the plants nearer the center of the field have stopped growing and dried up. The plants near the outside send their roots out where no alfalfa plants grow and hence where moisture exists. If the field were planted in rows, and cultivation continued between the rows an equally good stand might be secured over the entire field. By this method much less seed is required per acre, and generally more and better seed is secured than by the ordinary method of seeding.

The production of seed in the U. S. is restricted to the region west of the Missouri River, principally Western Kansas, Eastern Colorado, Northern Utah, and Southern Idaho. The dry climate of these regions produces conditions better adapted to the production of seed than does the more humid climate of other regions. The amount of seed produced per acre varies from two to ten bushels. Alfalfa is very tender when young, and requires a very carefully prepared seed bed. The soil upon which alfalfa grows best is a rich, deep, limestone soil with a great deal of humus. It prefers a light to a heavy soil and alfalfa will not grow on a low, sour, swampy soil, but requires a well-drained, fresh warm soil. It appears to be best adapted to the irrigated regions of the West, where the moisture can be controlled and where the plant gets a maximum amount of sunshine and a minimum amount of shade.

### THE "THORLEY" TORCH.

By J. W. Paxman.

When the demonstration train was recently passing through Iron County, Mr. R. A. Thorley of Cedar City presented a demonstration with a new and rather unique torch for burning brush and rubbish on the farms. The torch is so simple and inexpensive, yet so effective that I am pleased to describe it and to recommend its use, wherever there is an occasion to burn much rubbish.

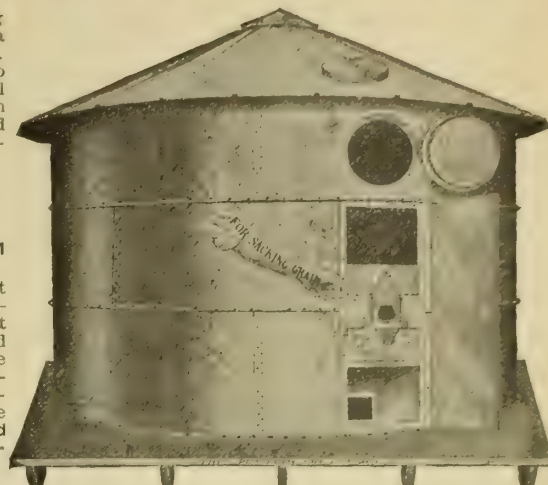
It consists of a piece of one inch chandelier pipe about 8 or 10 feet long, sealed or plugged air tight at one end. It is then filled with coal oil at the open end and a wick placed in. The wick should be 8 or 10 inches long, consisting of old burlap or old cast off clothing of any kind, rolled rather tightly and just large enough to fit snugly into the pipe. Insert the

## Of Interest to You

The proper storing of your grain is a valuable asset to you. It allows you to hold your crops until the price is such that you get a good price for your harvest.

### COLUMBIAN GRAIN BIN SOLVES PROBLEM

Theft proof — rat proof — storm proof — galvanized, it can't rust. So constructed that it keeps the contents in good condition always. Something that should be on every farm. Send us a postal for information today.



### YOU WILL NEED TWINE—LOOK AT THIS

We are overstocked on best grade binder twines. We have got to move this and will sell it at a very low figure to those who will order right away. So much so that it would pay a man to get in touch with us right away regarding his needs in this line. This twine is moving fast and you will have to hurry to get in on it. Send us your order today, before it is too late.

### ANOTHER BARGAIN

To lighten our stock we are selling JACKSON—four and one half foot, four tine Hay Forks at \$6.80 if ordered right away. Send for yours now.

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wick 6 to 8 inches, leaving 2 to 3 inches for the blaze.

If arranged properly a slight tap of the blaze end of the pipe on the brush or ground will scatter enough of the burning oil to start the fire. As the oil is used a vacuum is created in the sealed end and the torch will dwindle. When this occurs just raise the torch end into the air and as the coal oil drops into the sealed end it admits of a supply of air through the burning wick which will renew the volume of the flame. It is the vacuum that prevents an excessive feeding of oil and regulates the flame.

The brass chandelier pipe is recommended because of its lightness and easiness to handle. A gas pipe can be substituted but it will be more cumbersome and awkward to handle.

Such a torch will consume about 5 gallons of coal oil per day but will do the service of three men according to the testimony of Mr. Thorley, for, says he; "one man with this torch can burn as much brush as three men with forks." Certainly it is a valuable contribution in the process of eliminating the sage brush. A man or a boy on a moderately windy day can place a string of fire almost as fast as he can walk. We are indebted to Mr. Thorley for this new acquisition. No doubt many who have brush to burn during the summer months will be glad to use this labor saving device and extend thanks to Mr. Thorley.

The practice of removing manure from the stable directly to the field is a good one to follow. Here is where the manure spreader serves a good purpose.

### WHY GASOLINE IS HIGH

There are many causes. You know the number of automobiles in use has increased from about 450,000 in 1910 to more than 2,225,000 in 1915. All these cars use gasoline and other high-grade fuels. To give you some idea of the yearly consumption: Manufacturers agree that the average car will use about 500 gallons a year. The consumption for 1915 was more than 1,100,000,000 gallons. Estimated on the same basis the 1916 consumption will not be far from 1,350,000,000 gallons."

"There are many other demands—battleships are using lots of crude oil; motor boats, aeroplanes, and hundreds of small engines use only gasoline, and the export demand is very heavy. There seems to be a growing demand for gasoline.

One solution of this problem is offered in the use of kerosene. From the stand point of power production they claim kerosene is equal to gasoline.

The heat units, which is the power, vary as the weight. A gallon of kerosene is heavier than a gallon of gasoline—in other words, it has more power, gallon for gallon. It is a little harder to use in an engine for it is slower to vaporize. Some engine makers have been successful in building an engine that will operate at a profit of kerosene and other low-grade fuels. There is one thing you should look out for. A cheap, poorly-made engine will not operate successfully on kerosene. Get a good, well-made kerosene engine or kerosene tractor and it will save you more than half your fuel bills."



## LICE AND MITES ON POULTRY

(Continued from page 3)

been cleared for action, to use a figure of war.

If the house is in bad shape and one really means business, that is, if one seriously wishes to get rid of the mites, not just dabble around a little and in three weeks have as many mites as when he began—if one really means business, I repeat—use carbolineum avenarius with which to paint every quarter inch of the inside of the house where mites are in evidence or might be in hiding. Apply with an ordinary stiff paint brush. If heated before using, the carbolineum will be thinner, spread more evenly, and penetrate the wood better. It can not be diluted with water, but one can use one-fourth carbolineum to three-fourths distillate, or, if the added cost is not considered, ordinary kerosene may replace the distillate. Apply the mixture with a spray pump having an agitator. Use a nozzle giving a very fine spray and considerable force in applying so that the liquid is driven into every rough surface and every crack or crack in the wood. Two gallons of the mixture should cover thoroughly a 10x12 house, at the cost of material not to exceed \$1.

Crude carbolic acid costs about 35 cents per quart. One quart with two and a half gallons of lime should make a whitewash enough to spray a 10x12 building. Neither air-slacked lime nor whitewash will eradicate mites. If whitewash is put on boiling hot, the heat may accomplish the result, but lime alone is not death to mites. The second spray suggested is not therefore as effective as the first.

A third spray material highly recommended

is zenoleum, which costs about 40 cents per quart. Use about one pint of zenoleum to two gallons of water. Since zenoleum is so readily soluble in water, it is not as lasting in effect as the crude cresote or carbolineum. It is, however, much easier to apply. It is perfectly harmless to the operator and to the feet or feathers of the fowls coming in contact with it. The carbolineum, on the other hand, is very irritating to the nose, yes, and throat while spraying, and if it comes in contact with the plumage of the fowls it discolors them, which discoloration will not be lost until the next molt.

Crude cresote at about 30 cents per gallon, mixed with one gallon of distillate at about 12 cents per gallon makes a very cheap and effective spray.

To clean up a badly mite-infested building 10x12, proceed as follows: Sweep and dust thoroughly, first removing everything removable. Scrub with pearline and water; paint the roosts and supports for the roosts with heated carbolineum, cost not to exceed 25 cents. Next, spray the nests and every other bit of woodwork that harbors vermin or might do so, with crude cresote and distillate, one gallon of each to the mixture, cost about 40 cents. If there were no mites on the walls, or on the floors, and one was sure of this, whitewash would make a good spray for them. In either case, the fowls should be shut out of the house until thoroughly dry. It is well to bear in mind that a building once sprayed with carbolineum or cresote will not take whitewash well thereafter. Either it will scale off or dry out brown and dirty looking. Whitewash has the advantage of lightening the building and giving it a clean appearance. Above all things else, the poultryman should bear in mind that if he skips just one inch of infested space in his spraying he has left enough mites to produce thousands in a month. Therefore, be thorough and repeat the spray at intervals of four days until no trace of living mites can be found.

The recipe for government whitewash, which is the most permanent that can be made, is reprinted here: One-half bushel unslaked lime slaked with warm water. Cover during the process to keep in steam. Strain the liquid through a fine sieve. Add a peck of salt previously well dissolved in warm water; three pounds of ground rice boiled to a thin paste; and finally stir in, boiling hot, one-half pound of powdered Spanish whiting (plaster of paris), and one pound of glue which has been previously dissolved over a slow fire. Now add five gallons of hot water to this mixture, stir well and let stand for a few days, then put it on hot. To this mixture may be added two pints of carbolic acid, which will make it a better disinfectant. One pint of the mixture will cover one square yard if properly applied.

The following formula for making skim milk paint may be of interest to those wishing a cheap paint that will wear well and that will fill up crevices where mites might otherwise breed: Stir into one gallon of skim milk three pounds of Portland cement adding at the same time any paint in dry form that will give the color you desire. The milk will hold the paint in suspension, but the cement

will sink, therefore it will be necessary to keep the mixture well stirred with a paddle. Mix only enough at a time for one day's use. If the mixture is not thoroughly stirred as you use it, it will get thicker and thicker and it will be necessary to thin it by adding more milk. Carbolic acid or any other disinfectant can be added. It may be colored drab by the addition of a little lamp black, or a dull green by adding ochre and a small quantity of Prussian blue. Six hours after applying, this paint will be dry. It is quite lasting even in bad weather for outside work.

### FORGET IT!

If your business aint quite goin'  
Like it really ought to go;  
If th' seeds that you've been sowin',  
Are a sproutin' pretty slow,  
Fergit it!

If your home team's been a losin'  
An' you've lost a bunch of dough,  
Don't go out an' start to boozin',  
'Cause your heart an' cash is low—  
Fergit it!

If th' neighbors call you miser,  
'Cause your saving for a home,  
Don't you think you'll be the wiser,  
If you let them all alone  
An' fergit it?

If you're feelin' cross an' mean-like,  
Feelin' grumpy, sore an' blue,  
Jest go out in God's own sunlight,  
Stretch your arms a time or two—  
An' fergit it!

—Warren Frederick Lewis.

Better be conceited and know something than be humble in ignorance.

## What More Do You Want?

Fifty acres of high grade land in one of the most fertile sections of the State.

Soil a rich black loam that raises fruit, beets, alfalfa, alfalfa seed and garden truck—all in abundant crops that will compare favorably with any section.

Located on the railroad adjacent to two very live towns that furnish an excellent market for small products. Both of these towns are within short driving distance. Good schools nearby.

Would make an elegant farm home for the man that wants a farm not too far away from the business centers.

Prior water right at \$1.50 per acre if used.

CAN BE BOUGHT VERY  
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A groundless prejudice still remains in the minds of some people—a prejudice against a product which has no superior in the world—BEET SUGAR. This is the result of false claims made in favor of foreign sugar. There are some people who still maintain that cane is the better sugar. This is a mistake, a real injustice to a product which merits your support. Beet sugar, especially Utah-Idaho Sugar sets a standard which cane sugar finds hard to equal.

Give Utah-Idaho Sugar a fair trial, and your own good judgment of sugar value will tell you which sugar to use. Order this home sugar by the sack. Just say—

**UTAH-IDAHO SUGAR**  
ABSOLUTELY PURE

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### Sale Dates:

May 13, 17, 20, 24,  
27, 31; June 3, 7,  
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16, 23, 30;  
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13.

### Limit:

October 31st. 1916

Sale daily May 1  
to September 30  
inc.

### Limit:

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Following round trip fares will apply from Salt Lake City or Ogden:

Denver and Colorado Springs.....	\$22.50
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St. Louis .....	51.20
Chicago .....	58.00
Memphis .....	60.00
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Proportionately low rates from and to many other points.

Following round trip fares apply from Salt Lake City:

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San Francisco via Portland one way .....	58.50
Los Angeles via Portland one way .....	68.50
Tacoma .....	47.80
Seattle .....	49.50

See agents for further details.

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Hotel Utah,  
Salt Lake City.



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## Gem Herd of Improved Chester White Swine

This Herd Bred, Raised and Sold. Both Boar and Sow Grand Champions of the World's Fair held at Frisco this last year. Both Sire and Dam, is still in the herd. If such breeding interests you, write for illustrated catalogue. Stock of all ages for sale at all times.

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**Falls City Idaho**

## HOLSTEIN BULLS FOR SALE

Sons of Wachussetts Creamelle George the 2nd whos daughters have made from 350 to 500 pounds of butter fat a year just with ordinary care. Wachussetts was 2nd prize aged bull at the State Fair last fall and all of his get were first in their class but one. His dam gave 105 pounds of milk in a day that tested better than 4 per cent. No. 1 Iowana George 3rd a fine 18 months old son of Iowana Colanth Alberkerk. A high testing heifer from Iowana Farms, Iowa, her dam has a 19 pound record. This young bull was Junior Champion at the State Fair. The first check for \$200 takes him. No. 2 Wachussetts Beauty a 12 month old son of Maudeline Of Beechwood Beauty with a 23 pound butter fat record, milk test 4.6. She is a full cousin to Colantha 4ths Johana, \$150 buys this one. Take no chances, get a bull from a proven sire and one that has produced the goods. Offer several others from 6 months to 1 year old from \$75 to \$125 each.

**J. W. STUBBS**

**Charleston Utah**

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Provo, R. F. D. No. 1.

Breeders of S. C. White Leghorns and R. I. Red fowls and Airedale Dogs.

## UTAH HATCHED WHITE LEGHORN BABY CHICKS \$11.00 PER 100

Circulars, order-blanks, etc., upon request. Candee Colony Brooders carried in stock.

## GLENWOOD EGG FARM

**R. D. 3 Murray, Utah**

## 40 PER CENT OFF

on eggs for hatching for balance of season and on breeding stock as long as they last.

## 4 BEST LAYING STRAINS

R. C. Reds and White Wyandottes S. C. Black Minorcas and White Leghorns Stock sold on approval. Infertile eggs replaced free of charge. Now is your chance to get a Bargain. Write

**E. C. BLANPIED**

**Box 60 Milford, Utah**

## BABY CHICKS & HATCHING EGGS

White Leghorns, Brown Leghorns, Barred Rocks, R. I. Reds, Black Minorcas, Anconas, Buff and White Orphingtons. Prices on application.

## THE ORLAND HATCHERY

**Orland, Glenn Co. California**

## FOR SALE

Three pure bred registered Percheron mares. Must sell at once. One now in foal. Price for the three \$1,000.00. Write or call on

**E. D. HATCH**

**Heber**

## A BIG SNAP

## ON STATE STREET

Ten acres on State street, with water right. Subdivide into lots and make big money. If sold at once only \$7500. Terms.

9 acres, with water right, close in, fine for gardening, dairy purposes and for platting, only \$400 per acre. Easy terms or might trade.

**GEORGE W. DANLEY**

**707 Walker Bank Bldg.**

**Was. 2989.**

## Money to Loan

On improved farms with primary water rights, at reasonable rates.

Quick Service.

We lend our own funds.

## INTER-MOUNTAIN LIFE INSURANCE CO.

Home Office

**11th Floor Boston, Bldg.  
Salt Lake City, Utah.**

## GOING OUT OF BUSINESS

Duroc Jersey pigs for sale \$5.00 each, two months' old. Two old imported boars and three sows to be sold at a sacrifice.

**H. RONNENBERG**

**R. F. D. No. 3 Murray**

## 20 ACRES

farm in sugar beets, close to beet dump, good improvements, the best of soil, water and climate, nearly ideal and the price for this home is \$3500.00. Terms reasonable.

If you want one of the very best 60 acre farms in the valley, with improvements to correspond, a perfect dream, just the one you want, price is right. For prices and terms on variously sized farms in the Great Bear River Valley you must call or write to the

**Bear River Valley Real Estate  
and Insurance Agency  
Tremonton Utah**

## WANTED AT ONCE

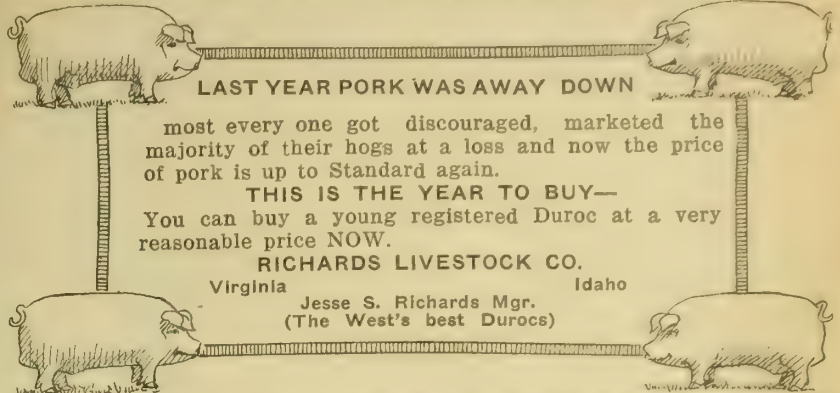
Six expert irrigators, levelers and fresno men. Address

**A. G. MACALLAN**

**Battle Mountain Nevada**

Always remember that it is much easier to sell a good animal than it is

**Utah to buy one.**



**LAST YEAR PORK WAS AWAY DOWN**

most every one got discouraged, marketed the majority of their hogs at a loss and now the price of pork is up to Standard again.

**THIS IS THE YEAR TO BUY—**

You can buy a young registered Duroc at a very reasonable price NOW.

**RICHARDS LIVESTOCK CO.**

Virginia Jesse S. Richards Mgr. Idaho  
(The West's best Durocs)

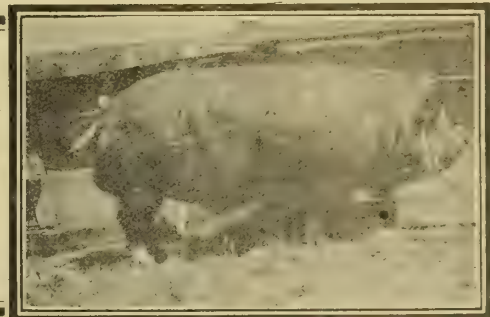
## BALLAMOAR FARMS

**JERSEYS**

**Richmond, Utah.**

**BERKSHIRES**

Dam Wickett  
Sallie 5th  
Sired by  
Masterpiece  
old for  
\$2,500.00.



Sire  
Rival's Lord  
Premier  
sold for  
\$4,050.00.

Rival's Premier Master 139,600.

Grand Champion boar at two Utah State Fairs. Sire of a dozen champions. The greatest breeding boar and most valuable pig ever owned in Utah. Young stock carrying the blood of this boar for sale at reasonable prices.

## CAINE LIVE STOCK CO.

**RICHMOND**

**UTAH**

## FOR SALE

At half price, one registered pure bred Percheron mare seven years old: Weight 1830 pounds. Imported from France by J. H. Moyle. Also her two year old stud colt is for sale.

**PARLEY P. PARRISH**

**Farmington, R. D. 53 Davis Co.**

## BUTTER WRAPPERS

We carry a large stock of the Best Vegetable Parchment Butter Wrappers and Especially Prepared Ink for Printing the same. We furnish them Postage Prepaid at the following Prices, money to accompany order.

100	.....	\$ .90
200	.....	\$ 1.25
500	.....	\$ 2.25
1000	.....	\$ 3.00

Send all orders to

**THE UTAH FARMER  
LEHI, UTAH**

Wanted to hear from owner of good farm for sale. Send description and cash price. R. G. List, Minneapolis, Minn.

## TO IMPROVE FARM

## FLOCK CULL OUT

The slow growing chickens. The old hens with long toe nails. The long or "crow-headed" hens. The poor winter layers. The hens that stay on the roosts.

Two Irishmen arranged to fight a duel with pistols. One of them was distinctly stout, and when he saw his lean adversary facing him he raised an objection.

"Bedad!" he said, "I'm twice as big a target as he is, so I ought to stand twice as far away from him as he is from me."

"Be aisy now," replied his second "I'll soon put that right."

Taking a piece of chalk from his pocket he drew lines down the stout man's coat, leaving a space between them.

"Now," he said, turning to the other man, "fire away, ye spalpeen, and remember that any hits outside that chalk line don't count."





Tom—You're not turning as fast as Dad does, Mary.

Mary—No Tom, but we'll get all the cream anyway with this lovely new machine. Dad says

## "It Skims Clean at Any Speed"

That's what this marvelous new invention actually does.

A fixed-feed separator may skim clean if in perfect order and turned at just the right speed. But every member of the family turns the crank at a different rate; no one can maintain an even speed all the time—it isn't human nature. Every old type separator has an unchanging inflow of milk. That's why it loses cream when not turned at exactly the right speed. The

# SHARPLES

## SUCTION-FEED CREAM SEPARATOR

gets all the cream because it automatically regulates the inflow exactly in proportion to the separating force—always just right for perfect skimming.

The Suction-feed Separator delivers smooth cream of even thickness that churns out more butter of choicest quality. If you sell cream you can **guarantee uniform density**.

You can increase the capacity of the Suction-feed by simply turning faster, and get through quicker if in a hurry. The new Sharples is the only Separator that can be hastened. You can easily pour milk from a forty-quart can into the low supply can. It's the largest found on any separator—and it's only knee-high.

The women folks prefer the Sharples because the simple tubular bowl is so easily cleaned. Has only three pieces—no disks to wash or to get mixed up. The tubular shape gives double skimming force.

The new Sharples is ruggedly built for hard service. It is neat, compact, runs easily and oils itself.

This wonderful machine will earn you a new dairy profit—without added expense. Our new free book, "Velvet" for Dairymen, fully describes the Suction-feed. Your copy is ready. Send for it today. Address Dept. 104.

## The Sharples Separator Co.

Jobbers for Utah, A. L. Brewer Dairy Supply Co., Ogden, Utah.

Also Sharples Milkers and Gasoline Engines

West Chester

Pennsylvania

Branches:

Chicago

San Francisco

Toronto

Portland



U. S. Ag. Sec.  
UT

# THE UTAH FARMER

Devoted to Agriculture in the Rocky Mountain Region

OFFICIAL ORGAN UTAH AGRICULTURAL COLLEGE

VOLUME XII; No. 50

LEHI AND SALT LAKE CITY, UTAH

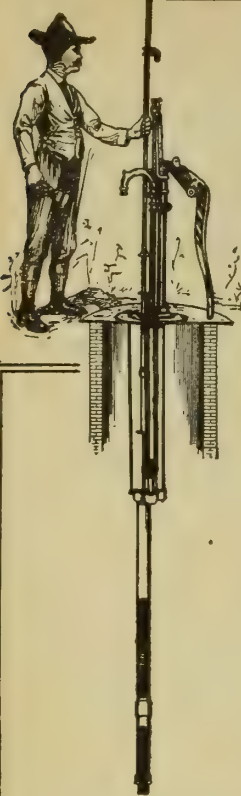
JULY 15, 1916



## MOUNTAIN LAKE AND SUMMER RESORT

This is the season of the year when many people are going into the mountains to spend a week or two. Why don't you take "a few days off" and go with the family into the cool mountains for a rest and vacation. Plan your work to this end. The increased effort you will be able to put into your work upon your return home will pay for the little time you may spend off the farm.





"So Easy to Fix"  
Pump

## Which Do You Choose?

The picture clearly shows how easily you can repair a

**"So-Easy-to-Fix" Galvanized**

*Red Jacket* Pump

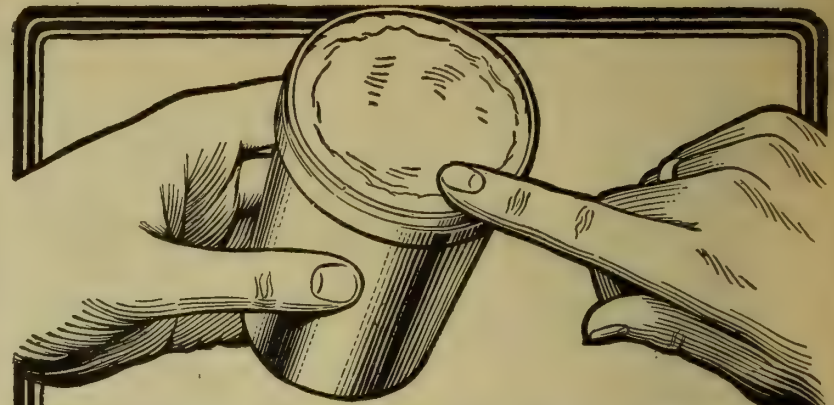
Contrast it with the hard work and expense of repairing the average pump.

Also, the "So-Easy-to-Fix" is the easiest working pump you ever used.

Made with galvanized pipe, and outlasts the black pipe pump at least one-third.

Come in and let me show you.

LANDES AND CO., Salt Lake City, Utah.



## NO AIR CAN GET IN THIS GLASS

It is sealed with Parowax. Mold or fermentation cannot form on fruit that is sealed, *air-tight*.

*Parowax*  
Pure Refined Paraffine

seals really air-tight. When melted and poured over the cooled preserves it forms a thin covering of *air-tight* wax. Seal your preserves with Parowax—it's sure—it's easy—it's quick—it's inexpensive. Parowax is not a chemical, simply a sealing agent. Guaranteed under the Pure Food Law. Your grocer sells it.

**THE CONTINENTAL OIL COMPANY**

(Incorporated in Colorado)

Denver      Pueblo      Albuquerque      Cheyenne  
Butte      Boise      Salt Lake City

# TO PROPERLY LEARN PIANO

You should have the benefit of the best instruction you can secure to make a success out of your piano study. Such instruction can only be had from a **master** of the art.

## Prof. J. J. McClellan's---By Mail---Piano Course

This course was compiled and written by this eminent performer and instructor for the express purpose of furnishing instruction to those students who live too far from the musical centers to get it direct. Successful students and musical authorities endorse this as the best "by mail" course, and one that is filling a long felt want.

**THIS IS THE COURSE** that is being taught all students of PIANO by the UTAH CONSERVATORY of MUSIC. Very reasonable in price and in so understandable a form that any one can grasp its teachings.

WRITE US TODAY for information on this or any of our courses you are interested in. A postal card will bring you the information without obligation on your part.

**Course in Violin, Voice, Organ, Band Instruction  
and Dramatic Art for those who so elect**

**UTAH CONSERVATORY OF MUSIC**

TEMPLETON BUILDING

SALT LAKE CITY, UTAH



# Address to Utah State Bankers

By Fred W. Merrill, Ogden, Utah, June 23, 1916, Dairy Development Department of DeLaval Separator Company, Chicago.

Mr. Chairman and Gentlemen:—

It is indeed a great pleasure to meet this body of men, representing as you do the financial interests of the communities from which you come. It has been said that the banker is the "power behind the throne" in his community, because of the influence he exerts upon all forms of commercial and industrial activity. I wish I might add agricultural activity, but unfortunately, in many of the Western States, the banker does not seem to fully realize the important relationship which should exist between his business and that of the agricultural development of the State.

The farmer of the West occupies a somewhat different position today to that of any other period of time. The cost of acquiring, equipping and maintaining a farm was never as high as it is now. In earlier times farms were acquired, equipped and operated by individuals with but a very small capital—the farmer was an individual unit—his business did not bear any vital relation to any other business in the neighborhood. He supplied the needs of his family, and the surplus found its way to the market. The labor of the farm was performed by hand—he did not buy expensive machinery because it was not to be had. To be brief Agriculture was not a business—not even a trade—it was a means of getting a living. How different it is today. Agriculture is a business. It produces raw material, it engages the manufacturer, and the marketing of farm crops is a gigantic business operation requiring skilled men, and a constantly increasing capital.

With all its growth we have done nothing in Agricultural development of which we can boast. Our per acre yields are about the same as they were in the early seventies. Our Agricultural efficiency, in spite of the State and National aid, shows but very little improvement. We are becoming more and more an agricultural importing nation. Our method of agricultural product distribution does not improve as much as it should, and the result is that the farmer receives only one-third of the value of the product which he has produced.

The farmers capital stock is constantly increasing. Competition is keener—more specialization is demanded—and society is demanding more and more that he give a better accounting of his stewardship of the land entrusted to his keeping, which land after all is the foundation of our national life. He is called upon to build and maintain better roads. He must provide and support a more effective and far more expensive school

system. He has a recognized position in the commercial world, and he must maintain it with dignity. Taking all of these factors into consideration I believe you will agree with me that the banker of today and tomorrow must play a more important part in Agricultural development—in Agricultural production, and in Agricultural commerce than he has ever played before. The business of banking and the business of farming must of necessity become more closely associated.

The three great pillars of civilization are Agriculture, Commerce and Industry. You men are so closely connected with them, that you become the connecting link binding them altogether into one great scheme of finance. You will have to acknowledge that the laws which govern your business operations are made solely in the interest of commerce, and that yours systems of banking are not at all suited to the scope of character of agriculture. The thing most needed today throughout the entire country is a modified law which will enable you to adapt your business to the business of Agriculture to the extent at least that the farmer may receive cheap money and a credit equal to that of any other business man when his security is as sound.

Is there any good reason why a dairy farmer, whose land is the most valuable of all farm lands because of its high state of cultivation and its constantly increasing fertility, whose machine, the dairy cow, is the most economic manufacturer of raw farm crops into human food, should not have a cheap rated, long term bond, similar to the cheap rated long term bond which is granted for a Municipal, County, State, Railroad or Industrial bond?

A prominent banker of a Western State recently told me that the security of the sheep man or of the range cattle man was considered to be very good, while the man who milked cows was generally considered unsafe, because of the character of his business and its very limited scope. I am inclined to believe that the banker who holds similar views is unfamiliar with the fundamental features of the dairy business. Before I finish I want to recount to you some of the things that the dairy industry has done for sections of country where it has been established.

I have no hesitancy in arguing for the dairy business in this Western country, and in this particular State, for if I read Agricultural history aright the dairy cow is badly needed in your general scheme of Agriculture. I want to talk dairying to you because my experience leads me to conclude that

the dairymen needs the bankers assistance, and the banker will receive more substantial—more constant—and more permanent business from the dairyman than from any other class of Agricultural men. The dairymen's profits are constant. His cream checks are paid weekly or monthly and his business is not hampered with frosts, with drouth and other climate conditions. His plan of farm management does not permit of crop failures, nor of depleted soil fertility. His cow works every day in the year, and if he has interest to pay you can rest assured that although it may work every minute—the dairy cow is also working every minute and making the money with which to pay it.

Wheat farming—Beet farming—Fruit farming, the three most highly developed farms of Agricultural Practice in Utah and Idaho are excellent schemes of farm management, but they all lack the element of constancy and permanency. They all take from the soil plant food element which cannot be returned unless some form of live oped farms of Agricultural practice in soil is difficult to recover, and continuous cropping of wheat has taught man cannot afford to place the support of his family in jeopardy by waiting year after year for a fruit crop hoping and praying that it may escape frost and if it does escape and grow to maturity to be competed to market it in an unsuitable, unreliable market.

It seems strange to me that as a result of your phenomenal development of the sugar beet industry in this State you do not look into the future and provide for a permanent maintenance of the sugar beet soil. I believe I am safe in the assertion that every man who grows beets should also maintain live stock in some form and the dairy cow fits admirably into a plan of crop rotation whereby feeds for the cow may be produced and the cows manure returned to the field for the support of the sugar beet. I would suggest that you investigate this phase of that wonderful industry, before it is to late, for of all valuable things in Agriculture barn yard manure is to the Utah farmer one of the most valuable. According to crop reports the yield of sugar beets in Utah is twelve ton to the acre. The average price to the farmer is five dollars per ton. His land then yields him \$60.00 per acre—Two acres \$120.00. Two acres of good land such as is used for beet growing will furnish enough feed for a good dairy cow. The cow that a beet farmer ought to keep would produce 9000 pounds of milk during the year. It should test 3.8 per cent butter fat or yield 342 pounds

of fat which according to present prices is worth 30 cents per pound or \$102.60. The skim milk is worth, for feeding hogs or poultry, both of which ought to be kept on the well managed irrigated farm—\$25.00. The cows calf is worth, when a year old at least \$35.00. The cows manure for the year is worth to the beet grower at least \$15.00. Altogether the cow has turned the crop grown on two acres into cashable products to the value of \$177.60.

I mention these figures merely to show that, the dairy cow will increase the farmer's income from his land, not only as a result of her conversion of farm crops into finished articles, but to show also that she will aid materially in increasing the tonnage per acre yield of beets. You might ask "What can the banker do to aid the dairy business?" It is not my purpose to tell you what you ought to do, but to tell you what is needed in this and in other states similarly situated.

The dairy business, in the first place, in this Western section needs the direction, confidence and support of the business men. The dairy industry is not a charitable institution asking for help, but those who are behind it need to have a good many obstacles removed so that they may help themselves. The Agricultural College should pay more attention to the dairy business and train efficient men to go into the field and develop the business. One of the chief phases of the dairy industry is the manufacturing phase. We need trained men to operate local creameries, but the facilities at the Agricultural College are not such that men can be trained as they should be. The Agricultural College needs a dairy building equipped, the courses in dairying strengthened, and considerable emphasis given this subject in the course of study.

The dairy man needs some cheap rated long term money with which to secure dairy equipment in the form of dairy stock, silos, barns, and dairy machinery. The biggest drawback to dairying out here is the poor cow. She is not an efficient animal. According to all information I can secure the average cow in Utah charges about 35 cents for every pound of butterfat she manufactures. The well developed dairy cow does it for 10 cents or 12 cents. You are not doing enough to improve the quality of the dairy stock. A few individuals are developing some splendid herds, but dairying is a community affair, and depends upon community effort. There are two ways of improving the quality of dairy cattle. One is to sell the poor cows and to buy good ones. The other is to purchase a bull of pure dairy breeding



and grade up" the common herd.

As an illustration of the extent—the poor cow operates, I am going to cite you the results of cow census taken in Minnesota not long ago.

There were 100 herds in the census composing 1092 cows.

The gross returns from the creamery was .....\$32,815.00  
The cost of feed was .....27,191.00

Leaving a profit of .....\$5,624.00

If all the cows had been equal to the best one the gross returns would have been .....\$71,072.00

The cost of the feed would have been .....29,576.00

And the net profit instead of

\$5,624.00 .....\$41,496.00

148 cows like those in the best herd were equal in producing power to the 1092. A dairy farmer had much better keep one good dairy cow than eight poor ones, but how to get the good cow is the problem confronting him. The question has been presented to bankers in other States and I am going to tell you what some communities have done.

The Ashland Wisconsin plan is one designed as a means of developing the dairy industry in the territory tributary to Ashland. Money for the purchase of dairy cows is furnished by the local bank. The farmer wanting dairy cows executes a note drawing interest at 7 per cent. The banks receive 6 per cent and 1 per cent is used to pay recording fees, postage and other incidental expenses. The notes are secured by a mortgage upon the cows and their increase, and by a guarantee from the business men of the city. The farmers are required to pay interest quarterly, and also to pay \$3.00 per month on the purchase price of each cow. He further agrees to breed the cows to registered pure bred bulls of the same breed as the cows, and to raise to maturity all the heifer calves. Hundreds of cows have been purchased under the rules of the plan. The standard of the cattle has been raised immeasurably. Individuals have been encouraged to act upon their own initiative and purchase good stock. The banks of Ashland are well pleased with the plan. There has been no trouble between the Guarantors and the Farmers.

**The Moser Plan**—This is the plan inaugurated by the Texas Industrial Congress. It provides for methods of co-operation between bankers, business men and farmers in the purchase of dairy cattle. Upon request from any town or community the Texas In-

dustrial Congress sends a man who is well qualified to advise on methods of dairying, to organize a Guarantors Association.

The Guarantors consist of the business men and the farmers. They provide the necessary credit whereby farmers, whom they select, may enter into the purchase of dairy cattle. The farmers furnish all the security demanded by the Guarantors Association, and pay for the cattle in the manner adopted by the Ashland plan. The farmers pledge themselves to follow the directions furnished by the Texas Industrial Congress. They agree to build silos, to grow suitable fields, and to conduct their dairy business according to the directions of the Guarantors Association. Ten communities took advantage of the plan and several hundred herds of good dairy cattle have been shipped into the State of Texas without any trouble arising anywhere along the line of the plan.

The Houston Dairy Loan Fund Association is one of the local organizations composed of local business men of Houston. They raised a fund of \$100,000.00 to be used in the purchase of dairy cattle and equipment. They have employed a man regularly to look after the guarding of the fund, and giving such supervision to the farmers as will be necessary for them to make the greatest possible success of the undertaking.

The First National Bank of St. Paul, Minn., has employed one of the foremost livestock men in the country as its Live Stock expert. This man spends his entire time looking after the live stock interests of the state, and encouraging farmers to adopt that type of farming. The First National Bank of St. Paul recognizes the fact that we have spent thousands of dollars in going over the country preaching to the farmers and telling them what to do, and that it is time now to begin to finance the farmer so that he can do what he has been told to do.

In Southern Illinois, during the past year, a campaign for more dairying has been conducted. The railroads were interested, and furnished gratis several bulls of dairy breedings. The manufacturers of dairy machinery were interested and contributed money. The bankers from all over the state became interested and money for the purchase of cattle was furnished in abundance. One banker became so enthusiastic that he dropped his work temporarily and traveled over the state encouraging the idea of "farmers buy cows" and then went into other sections in search of cows.

From several sources comes the cry of "better cows" "bankers should aid the dairy farmer to buy cows" and today the cry has reached Utah. There is no denying the fact that the Utah farmer, and the Utah banker should get together and advance the interests of the dairy industry. You men should lend encouragement to the building of silos, and as you lend encouragement lend a little money with which to do it. Silage is a cheap food in Utah for there are a number of crops that can be used for silage purposes. Green succulent feed is needed as much in winter as green grass is needed in summer.

In connection with all this talk about dairying I want to remind you of one other industry that fits into the dairy scheme and makes for profit. I have reference to the hog. The hog creates wealth very rapidly. \$100.00

# HOT WEATHER

the season a

## DE LAVAL SEPARATOR

saves most of any other separator or skimming system



IT'S A GREAT MISTAKE FOR any dairy farmer without a separator or using an inferior machine to put off the purchase of a De Laval Cream Separator in the summer months.

GREAT AS ARE THE ADVANTAGES of the De Laval over all other separators, as well as over any gravity setting system, at every season of the year, they are even greater during the mid-summer season than at any other time.

THIS IS BECAUSE HOT weather conditions occasion greatest butter-fat losses with gravity setting and render it most difficult to maintain quality of product with any gravity system or unsanitary separator, while moreover, the quantity of milk is usually greatest, and any loss in either quantity or quality of product means more.

THEN THERE IS THE GREAT saving in time and labor with the simple, easy running, easily

cleaned large capacity De Laval machines over all other methods or separators, which naturally counts for most at this time of the year.

HENCE THE GREAT MISTAKE of putting off the purchase of a De Laval Cream Separator in summer, whether you already have a poor machine or none at all, and every dairy farmer should keep in mind not only that a De Laval will pay for itself by next spring but may, if desired, be bought on such liberal terms as to actually save its own cost while being paid for.

EVERY CLAIM THUS MADE is subject to easy demonstration and every De Laval local agent is glad of the opportunity to prove these claims to you, in your own dairy, without cost or obligation on your part.

IF YOU DON'T KNOW THE nearest De Laval agent please simply write the nearest main office as below.

**The De Laval Separator Co.,** 165 Broadway, New York  
29 E. Madison St., Chicago  
50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER

### CATTLE RANCH

500 acre ranch located in best cattle country, joins best free range, put up 300 tons hay, will support 500 head of cattle now. All machinery new. Price complete, only \$15,000.

**FEDERAL LAND CO.**

Eccles Building Ogden, Utah

### SEND US YOUR KODAK FILMS

We Develop Any Size Roll 10¢  
We Develop Any Size Film Pack 20¢  
Prints Made From Only Good Negatives  
We Pay Postage

**SHIELDS STATIONERY Co.**

KODAK HEADQUARTERS

131 MAIN ST. OPPOSITE KEARNS BLDG. SALT LAKE CITY

If you want money, drop us a line.

We loan on first mortgages on Utah farms or Salt Lake City real estate at reasonable rates.

Prompt action and fair treatment if you do business with us.

**Palmer Bond & Mortgage Co.**

WALKER BANK BUILDING  
SALT LAKE CITY

Uncle Sam will carry your money in the mails to and from this old bank.

4 per cent paid on savings

**Walker Brothers Bankers**

Founded 1859

Resources over \$6,500,000.

SALT LAKE CITY



**EAR PERFECT TAGS**

Attached Instantaneously Name and Address. Numbered if Desired. LEG BANDS for Poultry, Pigeons, Turkeys. SALT LAKE STAMP CO. Salt Lake, Utah.



invested in brood sows, given proper care, will grow into \$500.00 during a period of twelve months. The hog is the very best market for all of the by products of the dairy and contributes liberally to the profits of the cow.

The state of Wisconsin is perhaps the leader of all the States in the union in the development of dairy business, and it might not be amiss to tell you of some of the achievements of the good farmers of that state.

Dairy cows are kept on 164,567 of the 177,127 farms with an average of nine cows to the farm. Utah has about three cows to the farm. The average cow in Wisconsin produces 200 pounds of fat a year. The average cow in Utah produces 100 pounds of fat.

The dairy products of Wisconsin are worth one hundred million dollars a year. Wisconsin has a greater variety of crops than any state in the Union, and she markets her crops in the form of butter and cheese. Much of the cheese consumed in Utah is made in Wisconsin from the hay and grain shipped from these Western States.

The dairy business is organized in that State to a high degree of efficiency and co-operation. An example of the work of a few leaders in the little town of Uaukesha might be given you as an idea of what might be accomplished here.

Until 1904 there was only one Guernsey herd of cattle in Waukesha county. Twelve years later 21 per cent of all Guernsey cattle in Wisconsin were found in Waukesha county. The first Guernsey breeders association was formed in 1906. It now numbers more than 150 members. Since 1906 or in ten years time Wisconsin has organized 51 Holstein, 37 Guernsey, 20 Jersey, 2 Shorthorn, 14 general live stock, 10 draft horse and 2 Swine Breeders Associations or one hundred and thirty-six in all.

What does it mean? It means that Wisconsin is now the leading dairy cattle state of the Union, and that buyers from every state in the Union, and from foreign countries go to Wisconsin and exchange their hard earned money for good dairy cattle. It means that Wisconsin farmers are money lenders, and not borrowers. It means that Wisconsin leads all the States in percentage of farms owned and operated by the owners—this being 151,000 out of 177,127. It means as one banker expressed it to me "In thirty years time I have never known a farmer who stuck to the cow to fail. They came here with practically nothing, and today are money lenders, and their land is worth \$150.00 to \$300.00 per acre.

Can you imagine what it would mean to this state if we could all take hold now, and pull together in the matter of building this one industry. If we could develop one or two or three breeds of dairy cattle and have buyers come from other states and foreign countries to buy them. If we could send trainloads of cheese, of butter, of condensed milk into the markets of the world with the same Utah brand of quality which characterizes many of our Utah products. I want to repeat again that nowhere in this great broad land of ours can conditions be more favorable for dairying be found.

The one serious drawback to the dairy business in Utah today is the

lack of market facilities. The manufacturing plants are too far removed from the sources of production, and when we attempt to transport cream long distances we interfere seriously with the quality of the furnished article.

I believe in the local creamery privately or co-operatively owned fully equipped for the manufacture of butter and cheese and fully protected by law from unfair and unjust competition.

A creamery can be organized and maintained in any locality possessing from 600 to 800 cows within a radius of ten to fifteen miles. An illustration of creamery building and its effect upon prices of farmers product and a general influence upon the dairy business might be of interest to you.

In Minnesota, Wisconsin 80 to 90 of the creameries co-operative are independent. The prices during a recent year averaged 32.93 to 33.41 in Wisconsin and 31.5 to 31.1 in Minnesota.

In Kansas and Nebraska 90 per cent of the creameries are of the centralizer type. The prices paid to farmers for butter fat during the same period were from \$20.83 to \$21.4.

Sixty per cent of the co-operative creameries of the United States are in Minnesota, Wis., and Iowa. In this area there are 37 cows per square mile. Seventy five per cent of the creameries in Illinois, Indiana, Kansas, Nebraska, South Dakota, North Dakota are centralized. In this area there are 13 cows per square mile.

I mention these figures merely to show that the local creamery is a big factor in determining the profits to the farmer for his dairy products. High prices prevail because of the high quality of the product, and there is always a good market for high class goods.

In my opinion it is very important that so many local creameries have been closed during the past five years, but the closing of the creameries has resulted largely in the lower price being paid for butter fat in Utah today.

You have a law which is designed to prevent unfair discrimination in prices, but it is not effective, because a clause was inserted at the end which nullified it.

Local creameries usually fail because of several factors any one of which is sufficient to cause failure, but when they all work together quick and sure death is certain. Enumerated they are—Insufficient number of cows—lack of local support—poor management—poor quality of butter, and unfair competition.

The creamery business in Utah needs supervision and direction. If a creamery man thoroughly trained could be employed to work with creameries and bring them up to a high state of efficiency valuable service would be rendered to the people of the State. In Minnesota, Wis. and Michigan several creameries co-operate in the employment of a creamery expert whose duty it is to develop efficiency in the local creameries, and standardize the products upon a quality basis.

Gentlemen, the dairy business is a big business and offers to you opportunities for a profitable investment.

It can become one of the most productive of wealth of any in the State if men and organization like yours will support it.

# Water Your Milk



The Common Water Trough is a Profitable Source of Disease Among Dairy Cows.



The Loudon Water Bowl Provides a Constant Supply of Fresh, Clean Water, Free From Infection. It Drains Automatically.

Don't take the milk pail to the pump, but keep a constant supply of fresh, clean, wholesome, water before each cow. Milk is 86% water, and to do her best as a producer the cow should

have a fresh drink whenever she wants it.

The Loudon Automatic Water Bowl enables the cow to water herself. She lifts the lid to let fresh water in; when the lid closes all refuse water drains off. No water stands in the bowl. No dirt can get into it. It is absolutely sanitary.

There is an individual bowl for each cow, with separate inlet and drain. No two cows drink from the same water.

Ask for booklet No. 11, or drop us a card.

**MILLER-CAHOON COMPANY**

Murray, Utah

Idaho Falls, Idaho

## TRUE ECONOMY

### CHEAPNESS

is not based on what you pay but on what you get for what you pay. That's why you should buy

### SCOWCROFT'S

NEVER-RIP Overalls and "MADERITE" Shirts

TRY THEM. They will give you more comfort and service for your money than any others you can buy.

### UNION MADE

and they always give Satisfaction

John Scowcroft & Sons  
Co.  
Ogden, Utah.

The Utah Work Clothes  
Manufacturers.





• • • Combined with the • • •  
Deseret Farmer and Rocky Mountain Farming  
Established - - - - - 1904

Entered as second-class matter in the postoffice at  
Lehi, Utah.

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#### OFFICES

All mail should be addressed to the Utah Farmer  
Lehi, Utah Kirkham Building.  
Our office at Salt Lake City, Utah.  
is at 417 McIntyre Building.



New York Office 5th Ave. Bldg.  
S. E. LEITH, Mgr.

Chicago Office Steger Bldg.  
TOM D. COSTELLO, Mgr.

St. Louis Globe-Dem. Bldg.  
C. A. COUR, Mgr.

**Change in Address**—When ordering a change in the address, subscribers should be sure to give their former as well as their present address, otherwise the address cannot be changed. This is a matter of importance to you and to us.

#### OFFICIAL ORGAN

Utah Horticultural Society, Utah State Dairymen's Association, Utah State Beekeepers' Association, Bear River Valley Farmers' Protective and Commercial Association, Agricultural College Extension Department and Utah State Fair Association, Utah-Idaho Millers' and Grain Dealers' Association, Utah Fruit Growers Association.

#### OUR GUARANTEE

We guarantee every subscriber against loss thru dishonesty or attempted swindle by any advertiser in this publication. We do not attempt, however, to adjust trifling differences between the subscribers and honest responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within thirty days from date of the transaction, and the subscriber must have mentioned Utah Farmer when writing the advertiser.

**Advertising Rates**—The advertising rates will be sent upon application.

Buy the goods advertised in the Utah Farmer.

Provide some shade for your animals these hot days. A little attention given to this matter will pay well in the increased returns that will come to you.

#### CARE FOR YOUR HORSE

At this season of the year we should guard against the overheating of our work horses. If we will just give this matter a little thought, and treat our horses about as we would wish to be treated, we will get much better results in our work.

About ten o'clock in the morning give each one of the horses a pail full of water, and do the same thing again in the afternoon about three or four o'clock. If a horse is sweating freely, and suddenly stops sweating, put him in the shade as soon as possible, and give him a moderate drink.

Regulate the amount of water that a horse will drink when he is very hot. The best plan, however, is to avoid overheating our animals.

#### BUY IMPLEMENTS NOW

A general review of the steel market would make one feel that now is the time to buy implements if you can do so. The steel mills have hundreds of orders ahead and even though the war were to stop it does not look like the present prices of the raw product would come down; very little if any. If the manufacturer has to pay present prices for the raw product the price of implements must go higher. We do not mean by

this suggestion that you should buy something you do not need.

The probability is that this advance in price will cause the farmer to take better care of his machinery. Less waste effort on the part of the operator may result from the increased prices. Rusty gummed up machinery is harder to operate. Better care will save time when machines are being used as repairs and breaks will be reduced.

If you need machinery and can buy it, now is a good time.

#### SUPPLEMENT THE PASTURE

It is a mistaken idea which some farmers have, who think that the pasture will provide sufficient feed for growing cattle or dairy cows. The pasture is a big help and in some cases were one may have extremely good feed in it may give all that is necessary. In most cases however we believe that the pasture is over grazed. Many of our farmers could be justly criticized for not feeding enough to their growing stock and dairy cows. It is well known that a cow acts as a machine and produces milk according to the food she is given. The better the cow the better the returns she will give. Too many blame the cow when if the truth were known it is the fault of the one who feeds her.

Do not expect a cow to give you milk if you do not provide the material (feed) with which to produce it. One of the cheapest means in supplementing the pasture is the silo.

It is a poor policy to over stock the pasture and allow livestock of any kind to shrink or the dairy cow not do her best.

Provide some supplementary feed to go with the pasture. Study your own conditions and try to have a balanced ration.

#### THE CREAM CHECK

We do not think enough farmers are cultivating the acquaintance of the cream check. Those who do not have an acquaintance, or know something about, the regularity with which a cream check arrives, should get started in the dairy business.

When other crops fail it seems as if the cream check continues coming, no matter how short we are of feed, we always find enough for the cows, and she produces milk just as surely as you have to pay your taxes.

Many people avoid doing anything with dairying because of the many little details that must be regularly attended to.

Markets for dairy products are growing each year and there seems to be an unlimited market for the community that produces dairy products of a standard quality, and of a sufficient amount to encourage buyers.

If you have not been getting a cream check talk to the fellow who has, and in nearly every instance he will recommend that you secure some dairy cows, because of the weekly or monthly cream check.

#### DAIRYING IS PROFITABLE

The market for cream is extending each year, and the facilities for dairying are increasing. In Utah the Silo has come to stay, and will add to the profits of the farm. We are learning how to better use our skimmed milk in the feeding of hogs and chickens, and in many other ways. The separator is becoming more popular because we are able to sell the cream and use the skimmed

milk on the farm, which makes dairying more profitable.

There is no longer any guess work necessary about the dairy cow. Use a pair of scales and the Babcock Test, and you are able to know whether the cow is profitable or not. Cow Testing Associations are helping to weed out the poor cows, and emphasize the value of good milkers. Guess work is being eliminated, and because of better methods, we are increasing our profits.

The value of manure in maintaining the fertility of our soils is an important factor in this branch of farming.

The study of dairying by experts, and the many valuable lessons learned from tests and experiments, and the good results that are coming from following this line of work on our farms, is going to mean an increased interest in dairying.

#### WILL DEVELOP DAIRYING

About four months ago we were strongly impressed with the Dairy Development that was being done in other states, and why should Utah be behind in this work? With this idea in mind we took the matter up with the Agricultural College, the Federal Dairy Division, and the State Dairy and Food Commission, to see if some special emphasize could not be given to the dairy business.

One of the first things we found was a seemingly lack of interest in this work on the part of the bankers and the monied men. Farmers were willing to purchase dairy cows, but did not have the money for this additional equipment on their farms.

Since then considerable work has been done to interest the bankers and others in this work. Our feature story this week is an address given by Mr. F. W. Merrill before the State Bankers Convention at Ogden two weeks ago.

It now looks as if the problem of securing money to buy dairy cows and equipment, such as silos, etc., has been solved by the organization of a company at Salt Lake City, with a \$200,000 capital. If a man has the feed for, and will take care of, some cows, he will be able to secure them, and pay for them on the monthly installment plan, which will average from about three to five dollars a month.

This company will secure a good field man, who will go into any certain district where the farmers and business men want to develop the dairy interests, and work with them. Some co-operative work along this line will be carried out.

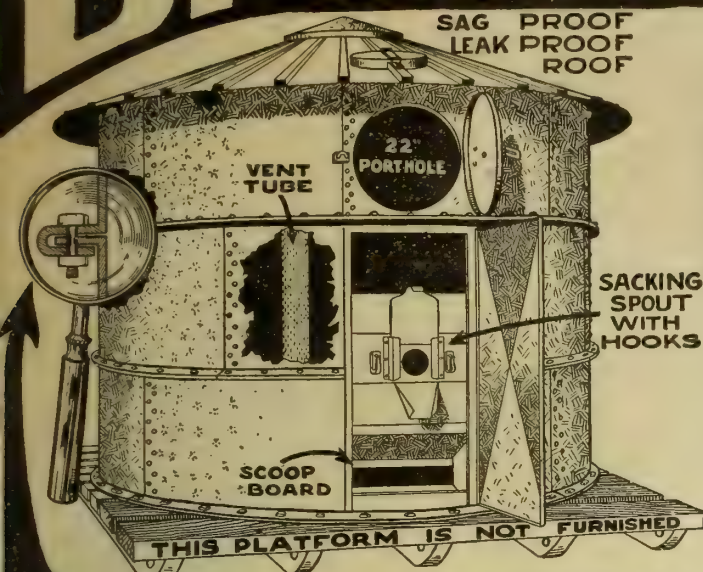
The matter of securing pure bred sires to be used in any community will be part of the work of this organization. Where dairying and the raising of dairy cows have been followed very closely, the best success has come to any community where they have but one, and not more than two, breeds of dairy cows in any section.

The Utah Farmer will keep in very close touch with this movement, because we believe that the dairy cow is one of the most important factors in the agricultural development of our state. This movement will result in more than just furnishing money for buying dairy cows or bulls, it will mean a closer relationship between the farmer and the banker. They are going to work for each others interests, and the result will be improved conditions for all of us.



# BIG PROFITS FOR COLUMBIAN BIN OWNERS

## \$200 To \$800 CLEAR PROFIT FROM EACH 1000 BU. BIN



SEE The Reinforced Joint

That's just what we mean, \$200 to \$800 clear profit on every 1000 bushels of grain stored in Columbian Metal Granaries. Thousands of farmers did this last year and you can do as well with one of these Wonderful Grain Bins. There's no chance to lose. Prices always advance and many predict \$2.00 wheat before the year ends.

**COLUMBIAN METAL GRAIN BINS** built to last a lifetime. They will pay for themselves the first year and show a big profit besides. After that every cent they make you is clear gain as there is no extra expense for up-keep. They are made of the best grade of galvanized metal and blacksteel enameled. They cannot collapse, blow down or burn up.

**DESCRIPTION** Both roof and walls are made in sections. Our patent reinforced joint prevents bursting when full and makes erection so simple that you can do it yourself in a few hours time. All bolts, tools and instructions are shipped with the bin.

The roof is sag-proof, leak-proof and self-supporting. The sections are joined by means of our special box joint which makes assembly easy and adds much to the appearance of the finished bin. Every bin is equipped with a large 6-ft. by 2-ft. entry door, also removable door board, sacking spout, collapsible scoop board, one ventilating tube.

You can mount these bins on platforms and haul them out to the threshers to be filled direct. This saves all the expense of extra teams, sacks and labor at threshing time. This saving alone will pay the cost of the bin.

### COLUMBIAN STEEL TANK COMPANY

WEST 12TH ST.

KANSAS CITY, MISSOURI

Western Distributors

Sam Peterson & Co., Salt Lake City, Utah.  
Harrington Plumer Merc. Co., Denver, Col.

**SEND NO MONEY** Just fill in the coupon, get our low freight prepaid prices and Free Grain Bin Folder. It has full details as to how you can make the big extra profits by storing your grain, beating the speculator at his own game.

Our manufacturing capacity is a grain bin every four minutes. This insures shipment of your order the same day it is received.

Decide now to own a Columbian Metal Grain Bin. You can then laugh at threshing time prices. If your dealer doesn't sell them we'll ship you a free one on our Special Send No Money proposition. If you want to get the full value for your wheat crop, then—

**SEND THIS QUICK**  
TO US OR NEAREST DISTRIBUTOR

.....Distributor  
of Columbian Metal Grain Bins.

Send me your Grain Bin Folder and low delivered prices.

I will have about.....Bu. of Grain.

Name .....

P. O. ....

Shipping Point .....

**Eli HAY BALERS**

makes clean, compact bales of anything balable. Built by pioneers. Highest award at four exhibitions.

**40 Styles and Sizes**

for every need. Biggest results and profits for users. Write for latest Catalog.

**COLLINS PLOW CO.**  
2076 Hampshire St., Quincy, Ill.

## Two Farms For Sale

Situated about 1½ miles east of Springville.

1st. Ostler Farm. Twenty-six and one-fourth acres all under good fence, orchard and farm land. Five room brick house, brick granary and cement cellar. A good spring and flood water right from Hobbie Creek.

2nd. Konold Farm. 93.9 acres—about 50 acres under cultivation balance pasture. About 9 acres orchard, 10 room frame house large barn, stable, sheds, chicken house, pig pen and some farm implements. Water piped in house and corral. Farm has flood water right from Hobbie Creek.

These farms are now leased until December 31, 1916.

Sealed bids will be received until 5 P. M. July 14, 1916.

All bids must be accompanied by certified check of 10 per cent of bid balance to be paid on or before January 15, 1917. Checks will be returned with all rejected bids.

The City Council reserves the right to reject any or all bids.

For further particulars inquire of  
J. L. WHITING, City Recorder  
Springville Utah

### GROWTH OF SHADE TREES

The tendency in planting street and shade trees is to plant rapid growers without thought of future results. It often occurs that species which grow rapidly while young are overtaken and their rate of growth exceeded later by trees that are commonly considered slow growers. Fast growing trees while young are generally short lived.

An idea of the rate of growth may be obtained from the following table which is the result of investigation and measurement of the growth of 560 average trees in the vicinity of Moscow, Idaho.

Measurements of average trees set out 5 years ago in the Forest School plantation of the University.

Species.	Age	Ave. Height	Ave. Spread	No. trees
		feet	feet	Meas.
White Ash	6	10.3	5.6	15
Basswood	6	5.5	5.2	15
Beech	7	5.8	4.9	12
Yellow Birch	7	14.9	9.4	6
Boxelder	5	17.1	8.1	10
Butternut	5	6.9		10
Catalpa	6	6.5	4.3	15
Cherry	6	11.6	5.5	8
Elm	7	14.7	7.1	15
Horsechestnut	7	8.0	4.3	5
Black Locust	6	17.0	9.8	20
Norway Maple	6	15.9	6.9	10
Silver Maple	6	15.4	5.4	17
Bur Oak	7	7.3	4.2	14
Red Oak	7	7.2	4.8	10
Black Walnut	6	12.1	5.3	15

<b>Evergreens:</b>				
Balsam Fir	8	5.6	3.4	15
Red Fir	8	5.5	3.6	20
<b>European</b>				
Larch	7	11.6	6.9	24
Austrian Pine	7	4.7	3.7	16
Coulter Pine	8	6.4	4.6	4
Jack Pine	9	10.7	8.2	5
Jeffery Pine	8	4.7	2.9	5
Lodgepole Pine	8	7.9	6.3	10
Pitch Pine	9	8.7	5.7	10
Scotch Pine	7	7.9	5.7	25
<b>Eastern</b>				
White Pine	7	3.3	2.4	24
<b>Western</b>				
Yellow Pine	5	3.8	2.4	10
Black Spruce	8	4.9	3.5	6

### Norway

Spruce 8 5.3 3.8 20

The following trees were growing under ordinary conditions around home grounds and in windbreaks on farms.

Silver Maple 24 44.2 19.6 4

### Norway

Maple 24 32.0 20.7 8

Walnut 24 31.9 22.3 20

Elm 24 38.9 17.5 10

White Ash 24 28.3 11.4 11

### Lombardy

Poplar 22 50.0 9.4 31

Red Oak 22 42.0 18.0 3

### English

White Oak 22 35.0 21.0 6

Chestnut Oak 22 35.0 19.0 2

Chestnut 22 30.0 18.0 6

Cork Elm 22 32.0 21.5 4

Basswood 22 24.5 17.4 10

### Evergreens:

### Norway

Spruce 24 35.0 15.0 14

Scotch Pine 24 32.3 15.3 15

Arborvitae 24 21.9 12.8 10

### Eastern

White Pine 22 37.0 22.0 6

Eastern Larch 22 31.0 15.0 4

### Western

Larch 22 41.5 22.0 4

These results can be duplicated throughout northern Idaho. Under irrigation in southern Idaho better growth should be obtained.

The height of Lombardy Poplar at 22 years of age is 50 feet. Red Oak at 22 years is 42 feet with a spread of 18 feet. Why not plant oak which will live 500 years and grow more beautiful each year. The oak will not sap the surrounding ground so much as poplar nor will it clog up the drain pipes. Windbreaks of Norway spruce or Scotch pine at 24 years are only 9 feet less in height than Lombardy poplar and give protection and beauty in winter as well as summer.—I. W. Cook, Assistant Forester.

### INSULTED

"I understand your husband lost his suit on a technicality, Mrs. Nurich." "Pardon me, sir; I'll have you understand that my husband pays cash for his clothes."—Buffalo Express.

## SAVE MONEY MR. FARMER

On Your Binder Twine.

We are overstocked on best grade binder twines. This has to be moved quick and we will sell it at a very low figure to those who will order it right away. The price will be so much lower that it will pay you to get in touch with us right away regarding your needs.

This twine is already moving fast and you will have to hurry to get in on it.

Send us your order TODAY, before it is too late.

Buy it of the reliable house of

**SAM PETERSON and  
SONS COMPANY**

"Everybody knows Sam Peterson"  
147 So. State St.  
Salt Lake City, Utah.

Finish what you begin. It is always demoralizing for one to develop the habit of beginning and not finishing things. Today's work should be finished today, then the work of tomorrow can be started with vim without the drag of having to finish the previous day's work.—Exchange.

A good many folks feed their cows as if they believed milk is produced from the air the animals breathe, and then wonder why their dairy falls off in production.

## STARS MAKE DOLLARS

If you're a man of energy and business ability, here's an opening worth consideration. There is a great demand for drilled water wells, and there's large sure profits to the man with a

**STAR DRILLING MACHINE**

Portable—Steam or Gasoline

Best by test. Low in price, high in practical worth. You can make it pay for itself and earn dividends all the time. Look into this! Sold on payment plan if desired.

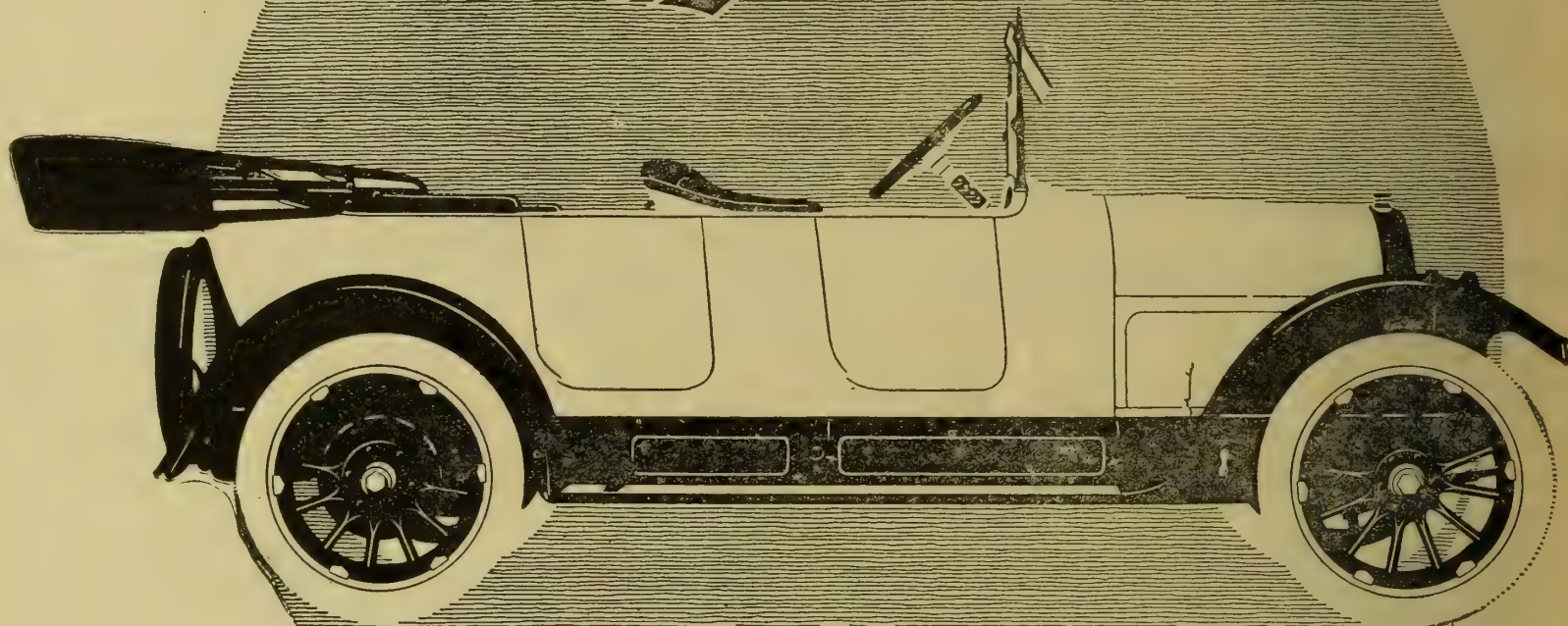
Our 140-page catalogue describes 21 different Star Outfits. Write us and we'll mail you this book which will point the way to money making. Write today.

Star Drilling Machine Co.  
842 Washington St.  
Akron, O.





*Overland*



*The New*  
**FOUR**

**The New Four**

*Model 85-4*

35 horsepower en bloc motor  
112-inch wheelbase  
32 x 4 inch tires—awn-skid rear  
Cantilever rear springs  
Auto-Lite starting and lighting  
Vacuum tank fuel feed  
Gasoline tank in rear with gauge  
Electric control switches on steering column

These two latest Overland developments again emphasize the enormous economy of enormous production.

No one has ever before made 1000 a day of cars of this size and class nor half that many.

1,000 cars a day enable us to use materials of a much higher quality and not only permit but actually enforce an accuracy of workmanship which smaller productions of cars in the same price range neither permit nor require.

1,000 cars a day make possible better, larger, much more comfortable cars than

have ever before been possible at anywhere near the price.

\* \* \*

This newest Overland is the largest Four ever offered for so low a price.

In the first place, note the longer wheel base—112 inches.

The enbloc 35 horsepower motor which has made the Overland famous is continued.

True—it is perfected even more and now it is a fitting climax of the experience obtained from a quarter of a million of these Overland motors in daily use.

**What 1000 Cars**

Shock absorbing cantilever type springs are a big improvement.

The gasoline tank placed in the rear is another improvement. The vacuum tank insuring a steady even gasoline at all times is still another improvement.

The famous and complete Auto-Lite electric starting and lighting equipment furnished.

All electric switches are on the steering column—right within reach.

The artistically designed streamline body with one piece cowl makes this car one of America's most attractive models.

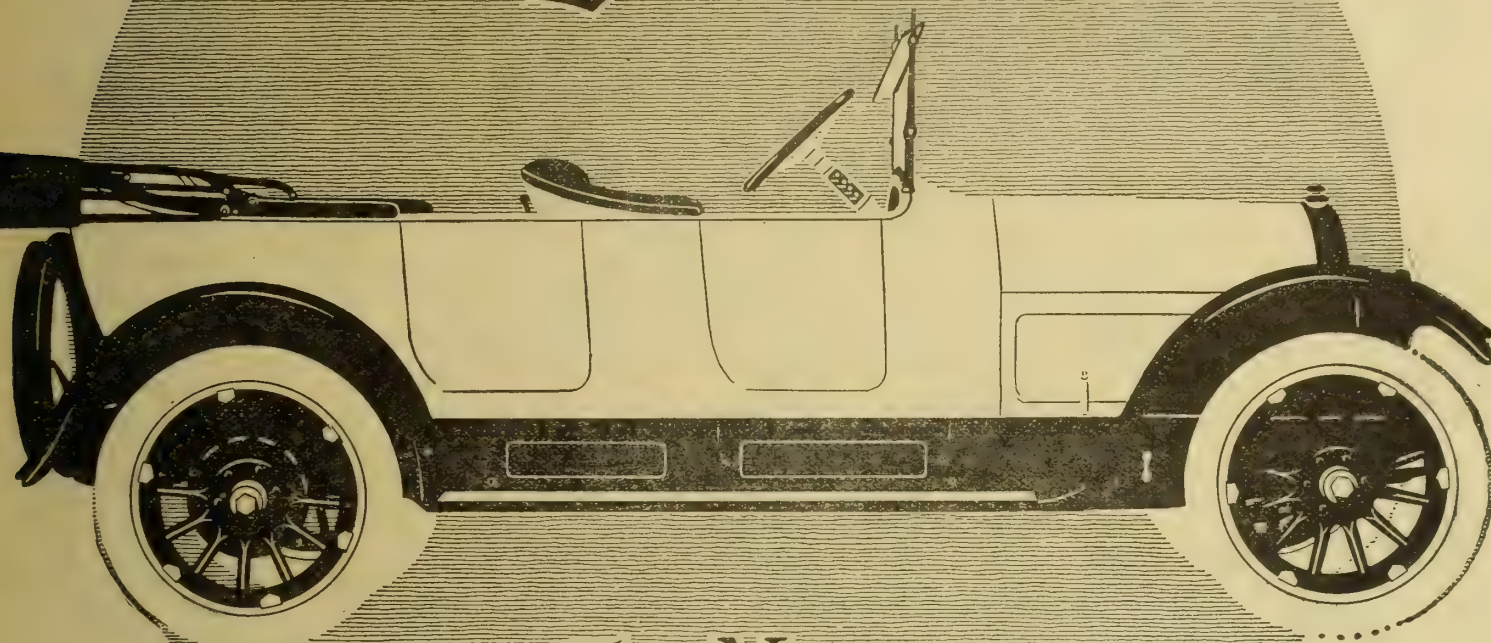
Catalog on request—please address Dept 755.

**The Willys-Overland**

"Ma's"



*Overland*  
TRADE MARK REG.



## The New SIX

### The New Six

Model 85-6

35-40 horsepower en bloc motor  
116-inch wheelbase  
32 x 4 inch tires —non-skid rear—  
Cantilever rear springs  
Auto-Lite starting and lighting  
Vacuum tank fuel feed  
Gasoline tank in rear with gauge  
Electric control switches on steering column

## Day Make Possible

Yet the price of this, our greatest four cylinder value, is less than any car of its size ever sold for before.

\* \* \*

No less a pace maker is the newest Overland Six.

Here is the Six of Sixes! A snappy five passenger long stroke 40 horse power model—easy to handle, light, economical, mighty comfortable, having all the advantages of higher priced Sixes, yet it comes absolutely complete at a lower price than any other six of its size.

Company, Toledo, Ohio

Its smart body design is long and low—having lines of artistic simplicity.

And the motor! This will warm the heart of every six cylinder enthusiast in the country.

You've heard all about fast getaways—smoothness—crawling and climbing on high. This Six does all that and then some!

The wheel base is 116 inches. It has cantilever springs and even-flow vacuum system with the gas tank in rear.

The tires are four inch. It has the complete Auto-Lite electric starting and lighting equipment with all switches on the steering column.

\* \* \*

Some Six! Yet the price is lower than any other Six of its size.

But go to the nearest Overland dealer and see these new models. Go over them—note all the very real and important improvements, and learn the prices.

The Overland dealer is ready to make demonstrations of both models now.



"Light as  
a Feather"

"Talk about light,  
fluffy, tempting  
and wholesome

Jelly Rolls,  
Cakes, Biscuits,  
and other good  
things. My! but

## CALUMET BAKING POWDER

certainly beats the band  
for sure results—for purity,  
economy and wholesome bak-  
ings. Tell your mother to try  
Calumet Baking Powder on  
the money-back guarantee."

Received Highest Awards

New Cook Book Free—  
See Slip in Pound Can.



## Superiority Forces It to the Front

Just as quickly as house-  
wives test Utah-Idaho Sugar  
they adopt it for every use. Its  
sweetness, purity and exception-  
al quality pleases in every in-  
stance.

You no sooner open the sack  
and see the glistening white crys-  
tals than you are impressed  
with its absolute purity.

Housewives are not the only  
ones to adopt Utah-Idaho Sugar.  
Domestic science teachers and  
manufacturers of fine pastry,  
confections, preserves, etc., pre-  
fer it.

If you have any faith in  
chemistry you accept the state-  
ments of the world's great scien-  
tists and food experts when they  
declare that beet sugar, the  
quality of "Utah-Idaho" is equal  
to any other sugar produced in  
the world.

Order it by name. You will  
find it more economical to buy  
it by the sack.

**UTAH-IDAHO SUGAR**  
ABSOLUTELY PURE

## THE HOME

### THE MAKING OF JELLIES

By Gail Richie.

Since only the juice of the fruit is  
used in jelly making, the food value  
of the product is not high, consid-  
ering the amount of money and labor  
expended. Fruit jellies, however, are  
among the most beautiful of table  
dainties, and almost every housekeep-  
er makes a number of glasses each  
year.

Ideal fruit-jelly is a beautifully  
colored, transparent, palatable product  
obtained by so treating fruit-juice  
that the resulting mass will quiver,  
not flow, when removed from its mold;  
a product with texture so tender that  
it cuts easily with a spoon, and yet  
so firm that the angles thus produced  
retain their shape; a clear product  
that is neither syrupy, gummy, sticky,  
nor tough; neither is it brittle and  
yet it will break, and does this with  
a distinct, beautiful cleavage which  
leaves sparkling characteristic faces.

#### The Cause of Jellying.

The jellying of fruit juice is due  
to the presence of a substance called  
pectin that has the properties of the  
familiar gelatin. This pectin occurs  
naturally in many but not all fruits,  
causing the juices to jelly, and is more  
abundant when the fruit begins to  
ripen. Pectin will not act unless an  
acid is also present.

The fruits that are rich in the  
pectin and acid, and therefore easily  
jellied, are green or partly ripened  
grapes, currants, plums, crabapples,  
sour apples, huckleberries, blackber-  
ries and raspberries. Peaches, quin-  
ces, pears and sweet apples contain  
large quantities of pectin, but an in-  
sufficient amount of acid to cause the  
jelly to form. However, jellies can  
be formed from these fruits by the  
addition of tartaric or citric acid to  
the juice. One level teaspoon to a  
quart is usually sufficient, but much  
depends upon how acid the fruit is in  
the beginning. Stir to be sure that  
all acid crystals are dissolved, then  
taste the juice. It should be about  
as acid as the juice of good tart  
apples.

The white inner peel of the orange  
and lemon contains a large amount of  
pectin. If these peelings were saved  
they might be used to advantage in  
jelly-making. The yellow part con-  
tains the bitter principle and should  
be removed before boiling the white  
to extract the pectin.

Test for the presence of pectin in  
fruit juices: Place in a glass one or  
two tablespoons of the juice to be  
tested and an equal amount of grain  
alcohol.

Mix thoroughly and cool. If pectin  
is present a gelatinous mass will form  
in the liquid, which may be lifted up  
on a spoon. It will be noticed that  
different juices contain different pro-  
portions of pectin. This fact accounts  
for the great difference in different  
fruits for jelly making.

#### Extraction of Juices from Fruits

##### (a)—Very Juicy Fruits.

Place clean fruit in an enameled  
preserving kettle, add just enough wa-  
ter to prevent burning, cover, place  
where fruit will cook rather slowly,  
stirring occasionally to prevent burn-  
ing. When simmering point is reach-  
ed crush fruit and continue heating  
until the whole mass is cooked

through. Transfer the fruit to a jelly  
bag made of flannel or cheesecloth  
and let the juice drain into an earth-  
enware or enameled receptacle. Do not  
squeeze the bag, as this will cause  
some pulp to come through and make  
the jelly cloudy, besides forming a  
scum which must be skimmed off af-  
terwards during the cooking.

##### (b)—Less Juicy Fruits.

Wash the fruit, discard unsound  
portions, cut into small pieces, cover  
with water and proceed as in case of  
very juicy fruits.

When Extraction of either very  
juicy or less juicy fruits is pretty well  
drained out, transfer pulp to preserv-  
ing kettle, cover with water, stir until  
well mixed, cover, bring slowly to  
boil as before, drain again. If, when  
tested with alcohol much pectin has  
been obtained, make a third extrac-  
tion.

Sugar, while not essential to jelly-  
ing, has an effect on the amount and  
quality of jelly that can be made from  
a given amount of juice. The addi-  
tion of sugar causes jellying to take  
place with less boiling down of the  
juice than it otherwise would, and  
up to a certain amount improves the  
quality of the jelly. Too much sugar  
spoils the texture and if in large ex-  
cess give a thin syrup mass. Too  
little sugar makes the product tough.  
The proper amount depends upon the  
quantity of pectin in the juice. For  
instance, with one cup Extraction I  
from grapes could be used one cup  
sugar; with one cup Extraction II,  
which contains less pectin, use  $\frac{3}{4}$  cup  
sugar.

It is well to add the sugar after the  
juice has cooked about one-half the  
time required for the making of the  
jelly. This prevents waste of sugar  
during the process of skimming. To  
prevent cooling the juice by the ad-  
dition of so much material at once,  
the sugar should be warmed before  
it is added to the juice.

#### Making the Jelly.

From two to four cupfuls of juice  
are put into the preserving kettle and  
set over a brisk fire, so that it may  
heat as rapidly as possible. As soon  
as boiling begins, the time is noted  
and when one-half the total number  
of minutes required to cook the jelly  
(see below) are up, the sugar is ad-  
ded and cooking continued, with occa-  
sional stirring to dissolve the sugar  
for the remaining time.

#### The Jelly Test.

Take up a little of the hot juice  
in a spoon and allow it to flow slow-  
ly back into the kettle. When the  
boiling mass "jellies," sheets off,  
or breaks off, as a portion of it drops  
from the stirring spoon, the jelly may  
be considered done. This is a quick  
test, and therefore a much better way  
than the time-honored one of taking  
out a portion of the hot jelly and al-  
lowing it to cool to see if it jellies,  
for while this cooling process is go-  
ing on unfortunate things may be hap-  
pening in the saucepan. Time is too  
precious at this point to wait for any  
cooling of samples; when the jelly is  
done no time should be lost in remov-  
ing it.

#### Time of Boiling

Juices rich in pectin require about  
ten minutes boiling; those contain-  
ing less pectin need twenty to thirty  
minutes. A mistake often made is to



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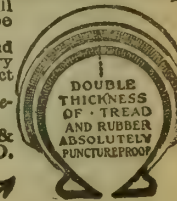
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Tires Tubes	Tires Tubes
30x3 in. \$ 8.60 \$2.30	36x4 in. \$17.45 \$4.65
30x3 1/2 in. 10.35 3.10	36x4 1/2 in. 21.20 5.60
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33x4 in. 15.75 4.20	37x4 1/2 in. 23.60 6.20
34x4 in. 16.70 4.35	37x5 in. 25.30 6.60

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also furnished. Non-skids at 10% additional.  
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30x3 1/2	11.92	14.04	
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36x4 1/2	28.39	33.26	TION

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write and we make 'em right.  
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TABLETS  
ONLY RATS WILL EAT  
TRY BEFORE YOU PAY  
KILLS 4 RATS FOR 1 CENT  
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cook the juice too slowly. The boiling should be rapid. Too long heating destroys the pectin.

**Covering the Jelly.**  
There are many ways of covering jelly. The object is to protect from molds and insects, and to prevent the jelly from drying out or absorbing water. The jelly may be brushed with alcohol and covered with hot paraffin. A tin cover may be used or paper pasted over the jar. It is well to label the jelly.

**Canning Fruit Juices for Jelly.**  
When sugar is cheaper in winter than in summer, it is more economical to can the juice in fruit season and make the jelly later in the year. Also, it makes it possible to work under easier weather conditions and storage room is saved as the juice may be stored in large receptacles which take up less space than do a large number of glasses. Time is saved because more jelly can be made in a day if but one of the operations is required and the jelly has a better flavor than when stored for several months.

Many varieties of flavor may be made by a judicious blending of fruit juices.

Apple jelly, because of its delicate flavor, lends itself admirably as a basis for other flavors. A few mint leaves tied in a cloth and cooked with the jelly gives a mint jelly suitable for serving with meat.

**Grape Spiced Jelly.**  
1 cup grape juice.  
1 cup sugar.  
2 teaspoons vinegar.  
1 teaspoon cinnamon.  
1 teaspoon cloves.

Color	10
Transparency	20
Taste	25
Consistency—hold shape, not flow	15
tender, will cut easily	15
firm, angles retain shape	5
No sign of crystallization	10
	100

**Fruit Juices.**  
The preparation of fruit juices

DAISY FLY KILLER

placed anywhere, attracts and kills all flies. Neat, clean, ornamental, convenient, cheap. Lasts all season. Can't spill or tip over, will not soil or injure anything. Guaranteed effective. Of all dealers or sent prepaid for 20c. HAROLD SOHMER, 150 De Kalb Ave., Brooklyn, N. Y.

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Come and see us or write.

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"Land Merchants"  
56 and 58 Main Street  
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takes little time or skill, yet there is nothing more refreshing on a hot day than a cold fruit juice, which can easily be prepared if the juice has been bottled at the proper season. The fruit juices may be used in preparation of such foods as ices, ice creams, gelatin desserts, puddings, sauces, etc.

Not only grapes but any juicy fruit may be used. The juice may be extracted in the cold, by a fruit press or the fruit may be cooked and the juice extracted as in jelly making. The juice may then be put into bottles, sterilized, securely corked, sealed and labeled.

**Orange-Rhubarb Marmalade.**  
5 pounds rhubarb.  
8 oranges.  
8 cups sugar.  
Cook rhubarb and oranges until reduced to a pulp. Add sugar and continue cooking until desired consistency is obtained. Stir often to prevent scorching.

**Sun Preserves.**  
This method is especially desirable for soft fruits, such as strawberries, that are likely to lose their form in cooking on the stove where stirring is necessary. The sun gradually concentrates the syrup, no stirring is necessary, and the low heat is sufficient to change the color. If the fruit is not heated up with the syrup before it is put in the sun, it may shrivel, because the very thick syrup will draw out the water but will not be able to get into the fruit to take its place. A short cooking makes it possible for the fruit to absorb the syrup. Select ripe, firm berries. Pick and preserve the same day. Hull and rinse. Place in shallow platter in single layer, sprinkle sugar over them; pour over them a thick syrup. Cover with a glass dish or plain window glass, but not tight enough to prevent evaporation of moisture. Allow to cook in hot sun 8 to 12 hours. Pack in glass jars or cups; tie paper over top or cover tops with paraffin. Keep in a cool, dry place.

**BREAKAGE OF JARS IN CANNING**  
When breakage of jars occurs it is due to such causes as—

1. Overpacking jars. Corn, pumpkin, peas, lima beans, and sweet potatoes swell or expand in processing. Do not fill the jars quite full of these products.
2. Placing cold jars in hot water, or vice versa. As soon as the jars are filled with hot sirup or hot water, place immediately in the canner.
3. If top cracks during sterilization the wire bail was too tight.
4. In steam canner, having too much water in the canner. Water should not come above the platform.
5. Allowing cold draft to strike the jars when they are removed from the canner.
6. Having wire bail too tight, thus breaking the jars or glass tops when lever is forced down.

**NUT CAKE**  
Three eggs, 1½ cups sugar, ½ cup butter, ½ cup sweet milk, 2½ cups flour, 2½ teaspoonsful baking powder and 1 cup meats of any kind of nuts. Flavor to taste. This is exceptionally good.

**MAPLE CARAMEL CAKE**  
Cream 2-3 cup butter and 2 cups



In Your Shoes  
All Day

Out in this hot, sweltering weather, tramping over the farm from morn to night—that's the kind of wear that's hard on socks. That's why the ordinary socks you buy go to pieces quickly and make your feet sore and blistered. Wear Durable Durham Hosiery, and when you kick off your shoes at night, you'll find it holeless and your feet comfortable.

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DRAIN and SEWER PIPE

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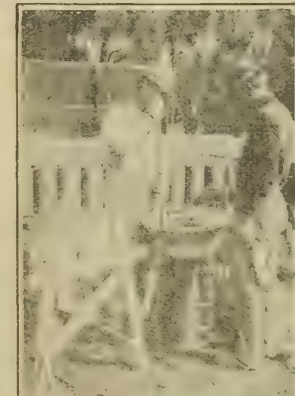
These molds make it possible for you to obtain cement pipe economically—no matter where you may be located.

If you are interested in the subject of either Irrigation, Drain or Sewer Pipe, write for our special Cement Pipe literature—it will save you money.

KELLAR-THOMASON COMPANY

1230 East 28th Street., Los Angeles, Cal.

"Originators of the Valve System of Irrigation."



powdered sugar. Add 2½ cups of flour, ½ cup milk and 6 egg whites. ½ teaspoon salt, 2 teaspoons baking powder, 1 cup milk and 6 egg whites. This is delicious with maple frosting.



## For silo owners

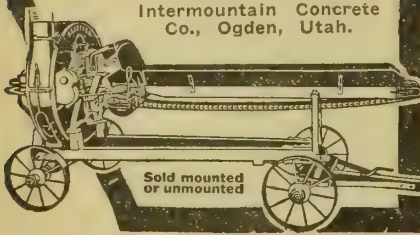
### Start now to choose your silo filler

Losses were very heavy last fall among farmers who depended upon somebody else's cutter, and couldn't get it when needed the worst. Others lost big because their cutters broke down at the critical time. The

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Is the dependable machine for the farmer—because so simple, safe and easy running. Small engines plenty powerful enough. Unlimited cutting and elevating capacity. Fills the world's largest silos as easily as twenty-footers. Self-feed table saves one man. Repair cost very little. Many still giving good service after ten and fifteen years of use. Talk with us about an ensilage cutter now. Drop in for a catalog, at least.

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Sold mounted or unmounted

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You'll save money and trouble if you insist on Golden Harvester Machine Oil for lubricating your mowers, rakes, binders, plows and threshers. "Every Drop Counts."

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When you answer the advertisements in this paper tell them you saw it in the Utah Farmer. Always buy advertised goods.

## Grow Roses Even In Mid-Summer

J. J. Thornher.

Nearly everyone remarks about the beauty and profusion of our roses in the spring. They begin to blossom when the last violets and narcissus are fading and continue until June, when we often hear it said, "It is too hot for roses." Rarely do we find beautiful roses in the autumn and even rarer are roses in midsummer. Most of the ever-blooming roses will bloom nearly every month of their growing season if given proper care; they should most certainly blossom in profusion in the fall and even well into the winter, but they will not do this if abused and neglected in summer. Roses, generally, are vigorous growers and require rich soil with good depth, and moderate to heavy irrigation with proper drainage, if they are to flourish. During the summer season roses should be watered heavily once every 7 or 8 days and it is well to loosen the soil about them as often as once a month. Better yet, however, for the summer season, is to give roses a heavy mulch of leaves, lawn clippings, weeds, or old rotted manure. This should be 4 or 6 inches deep and can cover all the ground about the plant. It may be moved a little from the plant at each watering and afterwards raked back in place. Such a covering helps very much to retain the moisture and besides it keeps the soil cooler and helps enrich it.

Roses should be grown by themselves in a small bed or in rows where they can be given such care as they need. They will not thrive when overgrown with weeds or choked with Bermuda grass. They have no place in a lawn or in the front yard, as they require frequent cultivation and fertilization. When given such care as suggested above they will bloom much of the summer and make a good strong growth. Of course, the flowers will not be as perfect nor last as long as those grown in spring and fall, but they will be a welcome addition to our rather limited summer bouquets.

When roses are not cared for in summer, and particularly when they are not irrigated regularly and abundantly, they make little or no growth and the foliage often partly scalds, withers and sometimes drops off. The stems may also die back in part and the whole plant receives a severe setback. The rootlets, however, have been damaged more than the parts above the ground, as a brief examination will show for many of the tender feeding ones have died. It requires several weeks or even months of good care to bring such a plant back into a good growing and flowering condition. The plant must grow new rootlets, then foliage, stems, flower buds and finally flowers. One might just about as well start with a new plant. Therefore, if the rose plant is not cared for in summer, nearly the entire fall is necessary to build it up or blossoming the coming spring. This is why the everblooming rose which is so much grown requires nearly constant care throughout most of the year. It needs as much attention as a lawn, and it will repay one equally as well. Give your roses care throughout the year and enjoy an

# A Well-Balanced Feed For Your Stock

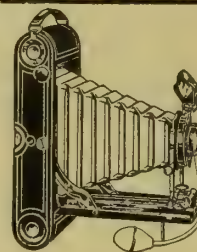
It is a well established fact in the feed world, that a well balanced stock feed is much better for horses and other stock, than straight grains.

Especially is this true when choice grains such as are grown here in the West are mixed with highly nutritious grain products to form a perfectly balanced food compound.

Such a feed is "SUN-RIPE." It reduces your feed bills and improves the health and efficiency of your stock.

Order a sack from your dealer, today.

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With each Kodak is furnished a book of instructions that makes it practically impossible for you to fail.

Send for yours today or for catalogue, to

## SHIELDS STATIONERY CO.

Kodak Headquarters,

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abundance of flowers at every season. Roses that are neglected in summer will not be in condition to blossom in the fall and often they are imperfect bloomers in the spring. This explains partly why the first lot of roses in early spring are occasionally imperfect. The plant does not have enough vitality to bring them to perfection. If one desires roses only in spring or if one does not have time to care



## RELIABLE FARM BARGAINS

We have some very exceptional bargains to offer this week.

We have one of the most beautiful tracts of land in the Salt Lake Valley with plenty of water, on the 5c car line, for sale at \$450 per acre on terms. One or more acres. If you are desirous of getting out of the City on a piece of ground to raise your own garden and chickens, this is the greatest opportunity you have had in a great many years.

113 acres with a first class water right from the Bear River Canal near the city limits of Garland, which we can sell you for \$120 per acre, ten years to pay at 6 per cent.

80 acres with water from the Bear River Canal, at Elwood, one-half mile from station. All under a high state of cultivation. \$100 per acre on terms.

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"Land Merchants"

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Write for liberal free sample—Postpaid.

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properly for roses in summer, then by all means plant the old fashioned kinds that our grandmothers grew. These were represented by the French damask rose, single and red or white, the common white rose, the common spiny yellow rose, often called "old lady rose," the old fashioned double pink rose, the manetta rose, with small flowers, the dog rose, the sweet brier rose, gold of ophir and Sherakee roses, two very fine roses and very profuse bloomers, nevertheless, they blossom, but once in the spring. These roses require very little care in summer.

## THRESHING MACHINE FIRES

Because of the many fires that have occurred in the Northwest the Washington Experiment Station have made an investigation and if you are interested should send for copies of the bulletin issued on this subject.

They learned that most of these fires were caused by the presence of large amounts of organic dust, chiefly smut, and that this dust was undoubtedly ignited by sparks of electricity generated by the moving machinery and the movement of materials within the machine. The unusual dryness of the season contributed to the danger of fire from this cause.

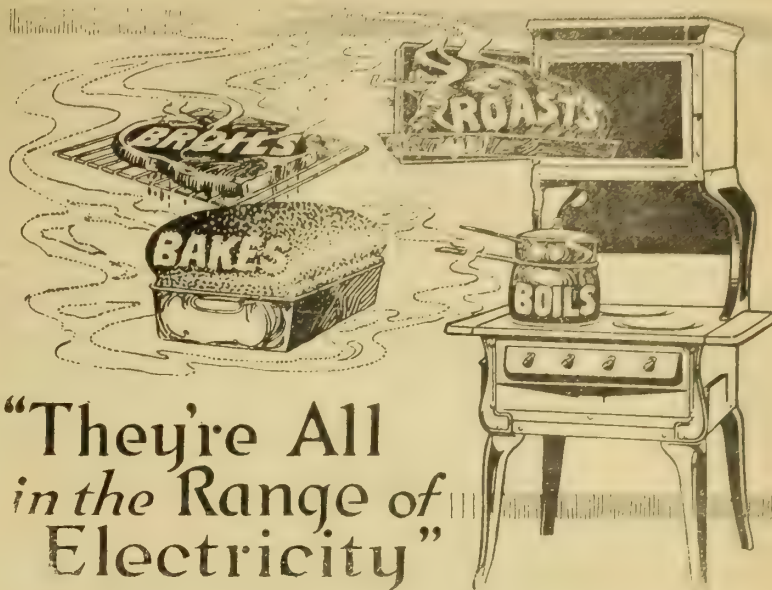
Owners of threshing machines may well pay attention to the suggestions made by the Washington authorities. They recommend that all metallic parts of the threshing machine be connected with the ground, for the purpose of conducting off the electricity generated. They especially recommend that the moving cylinders be so connected by an electric brush. They also advise the installation of a sprinkling system, made of gas pipe and connected with the boiler of the engine; so that in case fire breaks out water from the engine can be forced into the separator and the interior flooded. They also suggest that quantities of water and a supply of shovels be kept near the separator for emergency, and that furrows be plowed around the setting before threshing is commenced; and that the extra straw and other refuse which always accumulate about a threshing machine should be kept cleaned up.

## TIN CAN MENACE

Some of the simple things in life are of the utmost importance. Few homes if any but what have empty tin cans to dispose of. Now comes the suggestion that we puncture or make a hole in each of them before we dispose of them. These tin cans become the breeding place for malaria.

"We have not thought that the tin can is a menace to the public health. The expert malaria investigators of the United States public health service have found, however, that discarded tin cans containing rain-water, are breeding places for the mosquito, which is the sole agent in spreading malaria. A hole in the bottom of the empty can might have resulted in the saving of a human life! Empty tin cans have no business about the premises any way, and if we must so decorate our back yards, let's see to it that the can has a hole in the bottom."

The remedy is simple, and takes but a second. When we stop to think of it, most of us can recall disaster from the tin cans which too often decorate the farm yard and the city alley. Bits of food remaining in the



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in the Range of  
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**A very small cash payment  
and the rest in easy monthly  
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Puts an electric range in your kitchen AT ONCE.

The price includes cost of installing—and remember, you operate your electric range on a very low special cooking rate.

Come to the office—or telephone—and let us demonstrate the coolness, the cleanliness, the economy, and the success and practicability of the electric cook stove.

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"Efficient Public Service"

## GREEN CONCRETE MIXERS

No matter how small the job all concrete should be thoroughly mixed.

The old method of shoveling is tiresome from a physical standpoint and is very unsatisfactory for consistent mixing.

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**ABSORBINE STOPS LAMENESS**

from a Bone Spavin, Ring Bone, Splint, Curb, Side Bone, or similar trouble and gets horse going sound. It acts mildly but quickly and good results are lasting. Does not blister or remove the hair and horse can be worked. Page 17 in pamphlet with each bottle tells how. \$2.00 a bottle delivered. Horse Book 9 M free.

ABSORBINE, JR., the antiseptic liniment for mankind, reduces Painful Swellings, Enlarged Glands, Wens, Bruises, Varicose Veins; heals Sores. Allays Pain. Will tell you more if you write. \$1 and \$2 a bottle at dealers or delivered. Liberal trial bottle for 10c stamps. W. F. YOUNG, P.D.F., 142 Temple St., Springfield, Mass.

cans will rot. Aside from the loops and the smell from cans that have become garbage holders, if there are chickens on the place, they are very apt to get hold of any poisons which might develop. Many a chicken has been poisoned by drinking rain-water

from an empty paint can.

Emptying a can as soon as it is opened has become a habit—everyone knows the danger of leaving food stand in the open can; a safe way is to make the puncturing of the can also a habit.



## WITTE Engines

EVERY SIZE A BARGAIN. 2, 3, 4, 6, 8, 12, 16 and 22 H-P. Kerosene, Gasoline, etc.  
WITTE ENGINE WORKS, 3061 Oakland Ave., Kansas City, Mo. \$89.90

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advised you of this wonderful buy—you would listen to him wouldn't you.

### HERE IT IS

A farm of 50 acres in a locality where the soil has proven it fertility in the raising of all kinds of crops.

Can be purchased for less than \$4,000.00 on terms to right parties.

Near very good markets for Garden vegetables.

Prior water right \$1.00 per year if used.

Write or see about it today.

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Salt Lake City, Utah.

## POULTRY

### PRESERVING EGGS

K. B. Thompson.

Now that the season of incubation is past, all male birds should be confined away from the hens, in order that infertile eggs may be produced for market purposes. The advantages in quality of infertile eggs over fertile ones are manifold. It is a positive fact that the keeping power of infertile eggs is always greater than that of fertile eggs, and more so, at this time of year on account of the increased temperature. At 70 degrees F. the germ of fertilized egg will begin to develop; at a constant temperature of 90 degrees to 103 degrees F. incubation will proceed in a normal and natural manner. Infertile eggs will not germinate or produce chick development under any condition. The enormous advantage of infertile eggs for immediate use and for preserving purposes is therefore readily apparent.

The art of preserving eggs is one that is neither new nor difficult, and is one that may be used advantageously by every economical housewife and thrifty farmer. For centuries the Chinese have preserved eggs by the crude method of plastering mud and ashes over the eggs. In recent years a great amount of experimenting has been done in an effort to determine the most satisfactory and economical preservative for home use. The theory is based on excluding air from the contents of the eggs and thereby preventing the growth of decomposing micro-organisms within the egg. The preservative determined upon by a number of experiment as the best for home use is sodium silicate, which is commonly known as water glass.

Water glass is a heavy or thick straw-colored liquid, and may be purchased at a reasonable price from any druggist. Many factors enter into the price demanded. Quality, quantity, and the degree of desire the merchant has to become wealthy are the three governing factors. In barrel lots it may be purchased at from 20 to 30 cents a gallon. In five-gallon cans it should cost from 45 to 70 cents a gallon. By the gallon it may cost as high as two dollars. There is much water glass on the market that is not good. Good water glass is but slightly alkaline, while poor water glass overcome the excess of alkali, from a kali, which deteriorates the shell of the eggs to a point where it is so thin it is likely to break in the jar. To overcome the excess of alkali, from a teaspoonful to a tablespoonful of vinegar should be added to the water glass. In making the preserving solution from 10 to 12 parts of water that has been boiled and cooled should be used to one part of the water glass.

For a receptacle in which to pack the eggs, nothing better than an ordinary three or five-gallon stone crock can be used. However, wooden buckets or kegs may be used with entire satisfaction. The vessel should be thoroughly scalded and placed in the position in which it is to remain before the eggs are put into it. The eggs should be stored in a moderately cool, well ventilated cellar or room.

The ideal egg for preserving, besides being infertile, should be naturally clean and not washed clean, free from checks or cracks and not over

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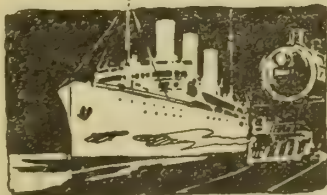
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seven days old. The eggs should be carefully packed in the jar until it is filled to within an inch or an inch and a half of the top. The solution is then poured over the eggs till they are completely covered. Place a cloth cover and then the lid of the vessel over them. From time to time look at the eggs to see that the liquid has not evaporated and allowed the top eggs to become exposed to the air. Should such an occurrence happen, pour enough boiled and cooled water into the jar to completely cover the eggs.

In general this completes the operation. However, there are a few other points to which attention should be called. A white precipitate, which is silicic acid, forms in the jar. This is a poisonous substance, but there is absolutely no danger from it if all eggs are washed before using. To boil water glass eggs, a pin hole should be made in the large end of the egg, to allow for expansion of air. Normally the shell of an egg is porous, but when preserved in water

glass it is sealed with a thin coating of glass, which is identical with window glass and which makes it necessary to make an escape for the air when boiling the egg. The hands should be kept out of the solution, as it will make them rough and sore. One cracked or checked egg will flavor the entire lot. An egg that has started to spoil will continue to spoil if placed in the preservative. It is not necessary to put all the eggs in the same day. Some may be put in one day and covered and others added as they are obtained. Eggs that have been preserved in water glass are desirable for all purposes up to eight to ten months of preservation, after which the albumen becomes thin and they are not entirely satisfactory to fry; otherwise they may be used with complete satisfaction. Eggs have been used after remaining in preservative four years. Do not try to use the solution twice. One gallon of water glass will preserve about thirty dozen eggs.



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Prof. G. E. P. Smith, Arizona A. C.

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2. Line the ditches with concrete.—This settles the seepage problem permanently.
3. Grade the land surface evenly.—High places become "slick;" low places introduce many troubles. The lands should be level crosswise but not lengthwise.
4. Plow deeply.—Subsoil alfalfa in heavy loams and clayey soils. Deep-plowed soil utilizes all of the rainfall.
5. Use short lands.—This depends upon the head of water, the slope, and the character of soil.
6. Test the soil the day after irrigating.—Use an earth auger or a pointed rod. Ascertain if the penetrating is equal from end to end of the lands or furrows.
7. Divide the head of water just enough to secure uniformity of irrigation.—If the upper ends of lands get too little water, divide "head" into more parts. Usually on porous soils the upper ends get too much water. Then a larger "head" is needed on each land or the lands should be shorter or narrower.
8. Irrigate before planting.—Then allow good root development before the next irrigation.
9. Examine the soil.—Dig into the soil 2 or 3 feet. Does the soil pack nicely in the hand? Irrigate when the soil needs water and not according to calendar.
10. Do not over-irrigate.—An excess of water is an injury. Small grains, the sorghums, potatoes, and beans do not require heavy irrigation. There is a limit even in the amount that alfalfa can use beneficially.
11. Do not hesitate to irrigate at night.—The evaporation loss is much less. Pumping plants should be operated night and day through the hot growing months.
12. Irrigate at the most favorable time.—Alfalfa when half grown but not just after cutting. Grains when just out of boot and corn when in tassel and silk.
13. Cultivate frequently.—A loose top soil reduces evaporation and permits the aeration of the roots. Use an alfalfa cultivator in August, in late fall, and in spring if alfalfa has been pastured. Crops planted in rows should be cultivated after every irrigation and after every good rain.
14. Rotate the crops; keep soil fertile.—Use alfalfa in the rotation. On fertile soil less water is needed per pound of crop produced.
15. Fight the weeds; eradicate them.—Weeds rob the crop of water, sunshine, and plant food.
16. Do not irrigate the county road.—Your neighbors do not appreciate this. Keep the gophers out of your ditch banks, shut off the water in time, and the county road will not become a bog.
17. Measure the water.—Set a weir on your supply ditch. Are you getting as much water as you pay for? Do you know how much each crop is using?

The supply of available plant food in soil is largely dependent upon the amount of decaying vegetation it contains. Soil without humus is dead


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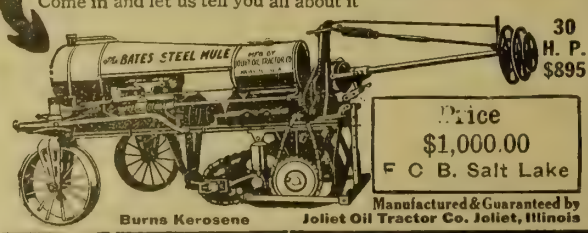
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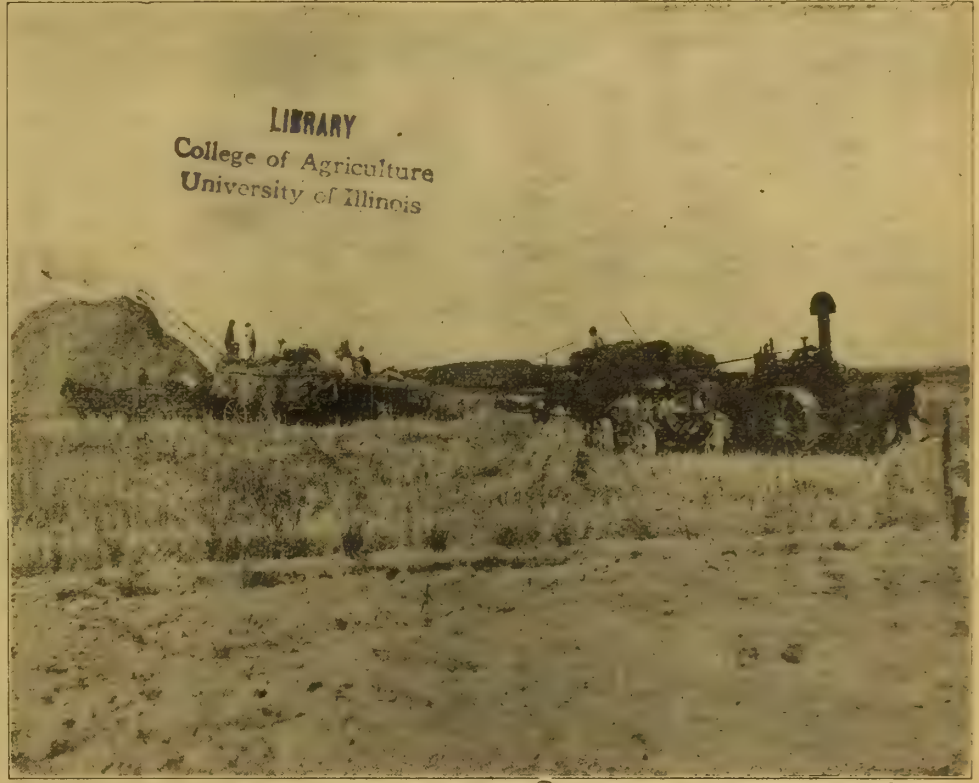
LEHI AND SALT LAKE CITY, UTAH

JULY 22, 1916

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## How to Bridge Graft

Save Fruit Trees Girdled by Mice or Rabbits or Seriously Injured by Blight or Other Diseases.

W. F. Fletcher.

Bridge grafting, the use of scions or small limbs to connect the cambium above and below a large wound or girdled strip, may be practiced successfully on almost any kind of fruit tree that can be propagated readily by grafting. It is used more often with the apple than any other fruit, but pear trees often are treated in this way, especially in certain sections. There seems to be no reason why the method should not also be successful on plums and cherries. Peaches, however, graft less readily and there may be some question as to the usefulness of the method in the case of this fruit. While seldom used on shade or other ornamental trees, this method of grafting probably would prove successful in overcoming certain types of injuries to them.

Mechanical injuries which may be remedied are usually inflicted by animals, by burrowing insects, or by implements carelessly used. Various diseases, such as pear blight, also cause local injuries which may call for bridge grafting. The trunks of pear trees are not infrequently completely girdled and killed by pear blight. Bridge grafting, if done in time, however, may save the tree.

The method also is useful when large areas of bark have been killed by sun scald or other troubles. The author of the bulletin points out, however, that protection of trees against rabbits and mice and disease is, of

course, better than having to bridge graft to overcome damage.

### Method of Bridge Grafting.

To be effective, bridge grafting should be done in the spring before growth starts, though sometimes it can be done after growth starts if dormant scions for the purpose can be secured.

Prepare the wound in the tree by cutting away all dead tissue and thoroughly cleansing the injured parts. If possible, sterilize by washing with a solution of bichloride of mercury, copper sulphate, or some other antiseptic. The irregular edges of the bark above the girdled tract or wound should be cut back into an even edge, far enough from the wound to make certain that healthy cambium is under the bark.

For the grafting, select scions from wood of the previous season's growth, either branches which grew the preceding season or water sprouts that are only a year old. The scions should be a little longer than the space which is to be bridged, so they will arch slightly over the central part of the

wound.

Bevel the scions at each end on the same side of the scion with a long sloping cut so that the wedge-shaped ends thus formed will be relatively thin and permit their being thrust well under the bark without danger of separating it unduly from the cambium at the points of insertion. The placing of the scions will be facilitated if the bark at the margins of the wound is slit for a short distance at the points where the ends are to be inserted.

### Importance of Uniting Cambium.

In placing the scions it is of the greatest importance that the cambium of the scions which is exposed in the sloping cuts at the ends be brought into intimate contact with the cambium that lies under the bark at the margins of the wounded area. The union of scion and tree can occur only where the cambium layers of the two come together. The scions may be secured in their proper positions, if need be, by driving a small nail through each end into the trunk. This

(Continued on page 13)

OPENED JAN. 1ST, 1913



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VOLUME XII.

LEHI, UTAH, SATURDAY, JULY 22, 1916

No. 51

## Summer Foods

Eunice Jensen.

Beware of overeating in hot weather. It is the best time to fast. More acute, and generally more immediate, suffering comes from overeating in summer than in winter. A precise knowledge of food values is therefore of more use in summer to the one who would keep fit for the whole heated term and to the one who would endure all the strains and be equable and happy in spite of heat than in winter.

Let us begin with a comparison of water and olive oil as foods.

Water is sometimes considered a food, because we need so much of it for digestive and assimilative purposes. We really need it for bulk as well as for lubrication, etc. Olive oil is actual fuel to supply the muscles with energy and helps in a different way from what water does in regulating temperature. Olive oil actively regulates, the water by its mere presence regulates. The difference between these two in caloric value is 2,000 per cup. Some difference.

There is a difference almost as great as this between fresh fruits and nuts. We may with a good deal of reason consider the fruits as water and the nuts as oil since most of them contain a larger per cent of oil than anything else.

The fresh fruits are largely water, some of them 95 per cent, and are necessary in the diet on this account. They supply bulk and give us the water in a pleasant form.

There are a good many people who cannot take as much plain water as they need, but resort to the safe lemonade (safe, but often too sweet) and the not too safe sodas or worse drinks. If they would allow a few drops of some of these later to dry on a bare table the residue left ought to speak louder than words of the unsafe and harsh quality of the drink.

The fruit is far safer and to take it at any time is hardly like eating between meals. A melon is 95 per cent water. Though eaten with a spoon, it is therefore a drink—not a crude one like soda, and the better in that it cannot be swilled down. The food milk should always be sipped instead of taken as a drink to gulp down, and all true drinks are better for being taken slowly.

With one hot cooked vegetable, nuts in the summer dinner somewhere, or at any rate at the luncheon, may take the place of meat if the eater's imagination is tameable. The nuts may be eaten in a salad well extended with celery to limit the quantity. Since shelled Brazil nuts yield 3,265 calories per pound, it is a good plan to add to them an equal measure of celery which yields only eighty-four calories

(Continued on page 11)

## Care of Poultry

By Helen Dow Whitaker.

For treatment of scaly-leg zenoleum is to be the most highly recommended. First, wash the affected fowl's legs and feet in lukewarm water and castile soap, soaking them for two or three minutes, then plunge the legs and feet into a half-and-half solution of warm water and zenoleum holding them completely submerged for at least two minutes. In very severe cases a second treatment after an interval of about five days may be necessary. Sulphur and lard will do the work as well, also kerosene, but either is a harsher treatment and more painful to the fowl. It is, moreover, very difficult to work the sulphur and lard thoroughly under the scales.

The depluming mites may also be disposed of by any of the above treatments. Care should be used in applying sulphur to the head of the fowl. Use the least possible amount. It is better to repeat the operation than to overdo the first application. Never use sulphur and lard or vaseline on very young chicks. Pure olive oil is safer.

Lose the Louse—Swat the rooster, smite the mite. Why not lose the louse? The common hen louse is a very active individual. He continually prowls around among the feathers and over the skin of his host or hostess. He can not fly and can crawl a comparatively short distance, yet it is surprising how thoroughly one lousy hen can disseminate the species throughout a flock. If this wanderlust of the louse could be made to lead to his loss, the comfort of the hen would be best served and the egg basket better filled.

The common hen louse hatches from nits, which are in reality tiny eggs, oval in shape. One end of the egg is flattened, the other, which is the larger end, is fastened to the barb of the feather. A careful search of a very lousy hen will probably reveal in the fluff around the vent certain feathers which bear whole clusters of these nits. They, like other eggs, hatch under favorable conditions, but their germs may lie dormant for days or even months in a cool, dry place, only to be quickened to life by the warmth and moisture. The baby matures in two to three weeks. Lice are unlike mites in that they have no mandibles with which to suck the blood. Their method of attack is to claw or bite through the skin, thus drawing blood, which they greedily eat. Lice-infested fowls, however, suffer less from loss of blood than from continual worry and loss of sleep, which produce loss of appetite, nervous exhaustion and bowel troubles. Chicks, especially, die or are

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## Alfilaria

Prof J. C. Hogenson.

Alfilaria belongs to the Geranium family. It is a native of the Mediterranean region of the old world. Its present distribution may be said to be world wide. It was introduced into the new world by the early Spanish explorers, and now grows abundantly in Texas, New Mexico, Arizona, California, and Southern Utah.

Alfilaria is a hairy, erect, herbaceous, annual, growing from six to eighteen inches in height. Its leaves grow in the form of a rosette, and are either opposite or alternate. Its flowers are a pinkish purple, with parts arranged in fives, and generally possessing a musky odor.

The amount of rainfall necessary to produce a good growth of alfilaria ranges from five to seven inches. Alfilaria appears to grow best between the altitudes of 1500 to 6000 feet. It has a thick deep tap root. Sheepmen speak in the highest terms of it as a forage plant. As a hay plant, Mr. Bachtizier, of Wickenboy, Arizona, says that he has fed it from time to time for fifteen years. He cuts it when it is in blossom, and treats it as he would alfalfa hay. He is of the opinion that when properly cured it is equal to alfalfa hay for milch cows. From one to 2.5 tons per acre have been secured. The best time to sow the seed is early in the spring, at the rate of three pounds to the acre. The seed should not be covered more than one half an inch. It is a pasture plant rather than a hay plant.

### Canaigre Root.

**The Name.**—The name, Canaigre, is a Spanish corruption of the French word Cana-Agria, meaning Sour Cane. The plant was sent to France by the early missionaries who came to Mexico. Its scientific name is Rumex Hymenospalus. It belongs to the order Polyganeceae, or Buckwheat family, commonly known as Sour Dock.

**Geographical Distribution.**—Canaigre is found over considerable areas in Texas, New Mexico, Arizona, California, Southern Utah and Northern Mexico. It is found along the river and creek bottoms, but is not entirely confined to the lowlands, as it is also found along the foot hills. It grows best in a sandy soil where the water table is near the surface of the soil during the spring months.

**Description.**—In appearance, it resembles somewhat the rhubarb, but has narrower leaves and shorter leaf stalks. It grows from one to three feet high and forms a cluster of dahlia like tuberous roots. The root may also be likened to sweet potatoes, growing in an upright cluster from three to twelve inches below the sur-

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## Lice On Hogs

Control Methods.

The farmer should frequently examine his hogs about the ears, flanks, and inside of the legs to see if they are lousy. Lice are common pests among swine, and vigorous and persistent treatment is required to eradicate them. They may be readily seen traveling among the bristles, particularly in the parts just mentioned. The eggs, or "nits," are small white oval bodies attached to the bristles. Dipping does not as a rule destroy the vitality of these eggs. Swine should be dipped frequently in order to kill the lice that hatch out of the eggs after the previous dipping. These lice are blood-sucking parasites, and by biting the hog and sucking blood they cause a great deal of skin irritation. Furthermore, they act as a drain on the vitality of the hog, through the loss of blood which they abstract. When lousy the hog is usually restless and rubs on posts and other convenient objects. The coat looks rough and harsh. This pest is transmitted from one animal to another by direct contact, or by contact with infected bedding or quarters.

### Dipping Swine.

To free hogs from lice they should be dipped two or more times at intervals of about two weeks. Several dippings may be required before complete eradication is accomplished. Do not fail at the same time to clean and disinfect thoroughly the sleeping quarters. Cresol compound (U. S. P.) may be used for dipping and disinfecting. For dipping, mix in the proportion of 2 gallons to 100 gallons of water; for disinfecting, in the proportion of 3 gallons to 100 gallons of water. Although not always as effective as might be desired, coal-tar products of the kind ordinarily sold as stock dips are commonly used to treat hogs for lice. For use they are diluted with water in accordance with directions supplied by the manufacturers. Cresol compound and coal-tar dips may be purchased at the drug store.

Dipping vats are made of various materials, but the most durable is cement. (See Farmers' Bulletin 481, Concrete Construction on the Live Stock Farm.) The vat should be set in the ground at a convenient place where there is good surface drainage away from the vat. A suitable size for a vat in which to dip hogs is 10 feet long at the top, 8 feet long at the bottom, 1 foot wide at the bottom, and 2 feet wide at the top. It should be deep enough so that the hogs will be completely immersed in the dip and will not strike the bottom of the vat when they plunge. If possible, the vat should be located so that a 2-inch drain pipe may lead from the bottom of the vat to facilitate emptying and cleaning, otherwise it is necessary to

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## DAIRYING

### THE CO-OPERATIVE CREAMERY

Wm. W. Owens, County Agricultural Agent.

Co-operative establishments have developed as a result of unfair distribution of gains by private business concerns. Where business is conducted efficiently by men who are honest and altruistic with their patrons, there is no need for co-operation. The first essential, then, for a co-operative creamery is a common and just dissatisfaction with existing conditions.

A co-operative concern requires a different type of organization than a corporation does. The controlling power must rest with the members: one man one vote, regardless of the amount of stock held. A moderate rate of interest must be paid on capital stock. The balance of the profit should be divided among the members according to the business they do with the association. The present laws of Utah do not permit such an organization.

The capital stock should be divided into shares of ten to one hundred dollars each. It may be paid up or secured by notes upon which money may be borrowed. The notes are usually cancelled by deducting a few cents from each pound of butterfat the signer delivers. The majority of stock should always be owned by the milk producers.

From the experience of others it has been determined that the following factors determine the success of a co-operative creamery: amount of raw material, character of manager and officers, character of patrons, and quality of milk and cream received.

The estimates of the number of cows necessary vary from three hundred to one thousand. One would do well to keep above the minimum as far as possible. The fact that one-half the idle plants in Minnesota are in localities where there are not enough cows, shows that many mistakes are made on this score. The Iowa Experiment Station gives some estimates of the operation expenses of two butter factories, the one supplied by four hundred cows, the other supplied by eight hundred cows. On the first there was a daily loss of \$2.04, on the second a gain of 1.46 per day. About one-eighth of the milch cows in a district will be dry throughout the year

and the milk of another one-eighth will be retained for home use; therefore if eight hundred cows were reported, only six hundred could be depended upon for supplying the creamery.

The manager of butter or cheese maker must be capable, an expert in his line. It is poor economy to attempt to save a few hundred dollars on his salary. At the Iowa Falls Creamery, according to government statistics, the butter maker receives a higher salary than any other man in the United States in that class of creameries, yet the patrons receive five cents per pound more for their fat than neighboring creameries pay. In Denmark the butter maker must have served as apprentice in a creamery and then have attended a dairy school; his salary is a fixed per cent of the overrun. The directors should be men of character, not merely politicians. They are usually paid for attending meetings.

The patrons must have the spirit of co-operation and show it by loyal support. The co-operative spirit is almost unknown among Americans, but as our farms grow smaller and we are brought closer to our neighbors we shall be forced to co-operate. One man and, especially a hired man, can not insure success; everyone should help.

The raw product received must be first grade, let others handle the poorer grades. The main advantage a small creamery has over a large one is that it can secure a better raw product. It should produce higher quality butter. If it fails to do this, the large centralizer is better because of the decreased cost of manufacture per unit. With a good uniform quality, however, a small plant should be able to compete with a large one.

We look to Denmark for ideals in co-operative dairying, which is established on a profitable basis there. The butter of the whole country is uniform and of high quality. This result has been secured partly by rigid inspection, something we shall eventually have to accustom ourselves to. The directors of a creamery prohibit the use of feeds which injure the quality of the milk; they inspect the premises and enforce regulations furthering cleanliness; they prohibit the sale of milk from a farm where a contagious disease exists; they impose heavy fines for violation of any regulation and demand an additional sum for the damage done the creamery.

To commence a co-operative creamery the initiative must come from the farmers. The government and state dairy experts should be consulted; under their direction the feasibility of the project may be quite accurately determined.

Alfalfa soil can be inoculated by treating the seed with a laboratory preparation or by scattering soil from an old alfalfa seed bed on the new field a short time before sowing the seed. Alfalfa should not be pastured until well established.

It is estimated that it costs the farmer more to haul a bushel of grain than it does a railroad to haul a ton of it. This is an argument in favor of good roads.

### PASTEURIZED MILK

Before the value of pasteurization as a hygienic measure was as well recognized as it is today, it was practiced in secret by a number of milk dealers as a means of preserving milk and preventing it from souring. Its commercial value in this respect is undoubtedly great, but its chief function is the destruction of disease-producing organisms. Proper pasteurization should destroy about 99 per cent of all the bacteria in the milk, although when the bacterial count of the raw milk is low the reduction may be somewhat smaller. The efficiency of the process, it is pointed out, can not be based on the per cent, but rather on the character of the bacteria destroyed.

The kinds of bacteria that remain alive after pasteurization depend on the temperature to which the milk is heated and the species of bacteria which are in the raw milk. Three processes of pasteurization, known respectively as the flash process, the holder process, and pasteurization in the bottle, are now practiced in this country. In the flash process the milk is raised quickly to a temperature of about 160 degrees F. or more, held there for from 30 seconds to a minute, and then cooled quickly. In the holder process the milk is heated to a temperature of from 140 degrees to 150 degrees F. and held there for half an hour. When pasteurization in bottles is practiced, the raw milk is put into bottles with water-tight seal caps, which are immersed in hot water and held for from 20 to 30 minutes at a temperature of 145 degrees F. In this way the pasteurized milk is not subjected to any danger of reinfection. On the other hand, the seal caps must be absolutely tight and this involves increased cost. In general, it may be said that the holder process is coming into greater favor than either of the others. This process permits of the use of lower temperatures which, for various reasons, is highly desirable. Another method of pasteurization, or rather a modification of the present holder process, suggested by the Department investigators, is that of bottling hot pasteurized milk. The process consists in pasteurizing milk by the holder process at 145 degrees F. for 30 minutes, then bottling it while hot in hot bottles steamed for 2 minutes immediately before filling. After filling, the bottles are capped and may be cooled by any of the systems in which the caps are protected. The bottles are sprayed with water or cooled by forced-air circulation.

When milk is held at 145 degrees F. for 30 minutes, all the disease-producing bacteria, so far as can be ascertained, are completely destroyed. At the same time a larger percentage of the bacteria that cause milk to sour and a smaller percentage of those that cause it to rot are left than when a higher temperature is employed. Pasteurized at a low temperature, milk undergoes no change which affects its nutritive value or its digestibility. Subjection to temperature of 150 degrees F. or more, however, does result in certain chemical changes. Finally, pasteurization at low temperatures is more economical because the expense of heating and cooling is less.

This, of course, does not mean that insufficient pasteurization should ever be tolerated. As a matter of fact, the

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1913	3,800,000
1914	4,500,000
1915	5,300,000
July, 1916	6,500,000

**AN INCREASE OF  
\$3,300,00, MORE THAN  
DOUBLED IN FOUR  
YEARS.**



**Walker Brothers  
Bankers**

SALT LAKE CITY



has been treated. As has been said already, this is one reason why pasteurization in bottles is advocated. One false step in handling the milk after it has been pasteurized will undo all the good effects of the process. The milk should be cooled as rapidly as possible to about 40 degrees F. and kept at that temperature until delivered. If this is done, there is only a slight bacterial increase during the first 24 hours. It has been held by some investigators that bacteria grow faster in pasteurized milk than in raw milk. This point, however, has never been thoroughly established and other investigations indicate that the rate of increase is approximately the same.

Another objection that has been raised to pasteurized milk is that the bacteria which cause it to sour are destroyed and that without their restraining action the putrefying organisms which survive from toxins and putrefactive products in the milk. As has been pointed out, this is true only of milk that has been pasteurized at a high temperature. As a matter of fact, the bulletin concludes, pasteurization by the holder process is today the most effective means of obtaining safe milk. This is especially true of cities which consume such great quantities that thorough inspection is almost impossible. New York City, in 1912, for example, used 2,500,000 quarts a day. This was furnished by about 350,000 cows and some of it was transported more than 400 miles. One hundred and twenty-seven thousand persons, it was estimated, were engaged in handling it. Under such circumstances pasteurization is a necessary precaution. It is, however, to be regarded not as a substitute for, but as a supplement to, care and cleanliness in the production of milk.

#### MIXED PASTURES I. D. O'Donnell.

The very creditable movement for the establishment of permanent pastures on irrigated lands is making considerable headway. While for hogs there is nothing more profitable than straight alfalfa pasture, the losses from bloat among cattle and sheep on alfalfa pasture have made many farmers give up pasturing alfalfa. The solution is to put in mixed pastures.

In discussing this subject some objections are heard to putting in permanent pastures for the reason that "irrigated land is too expensive for pastures." The best answer to this objection is the fact that in the portions of this country where land is highest priced large areas are given over to pasture and yield good returns. In England, where land is still more expensive, the ordinary farming plan is to have a great portion of the holding in permanent pasture which is liberally fertilized.

The particular advantages of a mixed pasture are based on the following conditions:

No single pasture plant is best for all soils and seasons.

Different pasture plants have varying rooting and feeding facilities and different plants may use the same soil.

Different plants start their growth and mature at different periods of the growing season, and a proper mixture furnishes growing pasture throughout the season.

Spring is the best time to start permanent pastures.

For bench lands under irrigation (per acre):	
	Pounds.
Kentucky blue grass.....	12
Bromus inermis .....	8
Perennial rye grass.....	6
Orchard grass .....	3
White clover .....	2
Red clover .....	2
Alfalfa .....	2
For light sandy soils under irrigation (per acre):	
Kentucky blue grass .....	8
Meadow fescue .....	12
Tall meadow oat grass.....	5
Bromus inermis .....	8
White clover .....	2

For low moist lands (per acre):	
Perennial rye grass .....	8
Redtop .....	10
Rhode Island bent grass.....	4
Meadow fescue .....	4
Timothy .....	2
Alsike clover .....	5
White clover .....	2

If you plan to keep livestock, which you should do, you will find it to your advantage to have a good permanent pasture. You should arrange this pasture with fences so one portion may be used while another portion is being irrigated and started anew. A good pasture properly used is one of the most profitable uses for your land.

### Weather Report for June General Summary.

June, 1916, was a very windy, dry and cool month. It was the driest June since 1912, and much drier than June of last year. Although the temperature averaged below normal, it was 1.4 degrees higher than the average for June, 1915. The wind was especially detrimental, drying the newly irrigated fields. It was not a favorable month for crops, the growth being very slow, especially with the dry-farm products. Alfalfa made poor progress, and in some places, due to frost, it had to be cut early in the month. At the end of the month, however, haying was in progress in most of the valleys, but the crop was estimated at only 75 per cent of the average. Range grass dried badly, but there were no reports

of stock being in poor condition as a result. Wheat was ripening fast at the end of the month, and in some places rye was being harvested. Only a fair crop of currants and gooseberries was secured. At about the time of the summer solstice which occurred this year on June 21st, a cool spell was experienced, and some stations reported their lowest temperatures for the month on that or adjacent dates. A snowstorm and a minimum temperature of 22 degrees occurred at the Utah Experiment Station on the 22nd.

#### Temperature.

The monthly mean temperature for the State was 62.2 degrees, which is 2.2 degrees below normal. Of the 32 stations with records of 10 years or more, only 7 reported monthly mean temperatures above normal, and the remainder below. The greatest 61.8 degrees; and the greatest plus departure was 1.9 degrees at Emery, whose monthly mean was 61.8 degrees; and the greatest minus departure was 9.2 degrees at Kelton, whose monthly mean temperature was 61.6 degrees. The lowest temperatures occurred usually on the 1st, 2nd, 3rd and 22nd, and almost every station reported temperatures below freezing during some period of the month. The lowest temperature was 20 degrees on the 2nd, 7th and 23rd at Scofield. The warmest period of the month was from the 14th to the 18th. The highest temperature observed was 107 degrees at St. George on the 16th, and most stations, except those at the higher elevations, reported maximum temperatures of 90 degrees or above.

#### Precipitation.

The precipitation for the State averaged 0.22 inch, which is 0.28 inch below normal. The greatest local monthly amount was 1.25 inches at Clarkston. Thirty-nine stations reported an entire absence of precipitation, while fourteen reported only traces. All stations having a record of ten years or more reported amounts below normal, except Farmington, Logan and Tooele, where slightly more than normal amounts were recorded. Scattered showers fell on

the 1st, but more general showers fell on the 21st. The greatest 24-hour amount was 0.81 inch at Millville on the 21st. Snow fell at 9 stations, the greatest monthly amount being 2 inches in Meadowville.

## The Torrens System

For a number of years, systematic efforts have been made to adopt the Torrens system of registering titles. These efforts have been defeated by interested parties, that is, by people whose business might be injured through the adoption of this system.

Under our present system, each land owner has an abstract which shows the record of the land from the government entry down to the last owner. This abstract shows the various persons who have owned the land, the mortgages which have been put on it from time to time and paid off, any court actions which have had an influence upon the title, in fact, everything which has had to do with its ownership. If the owner of the land wishes to put a mortgage on it, he must take the abstract to the loan company. The attorney of the loan company examines it, to see whether or not the title is good. Very often, he finds a number of little things which seem to cloud the title, and the owner of the land must go to some expense to get these straightened out. If the owner wishes to sell the land, he must go through the same process. A title may be passed as perfectly good by one attorney, but may be questioned by another.

Every time the abstract is examined, someone must pay an attorney's fee. If the attorney finds flaws in it, action must be taken to correct them; and after this is done, the abstract must bring the abstract down to date, and someone must pay him. As the years go by, attorneys are becoming more and more particular. Things which they passed ten years ago, are now questioned. Many attorneys pride themselves on finding these little technicalities, which must be corrected.

Under the Torrens system, the land owners will take his abstract to the register of titles, who is a state officer. This officer examines the abstract. If he finds any things which should be corrected, he points them out, and the owner of the land has them corrected. When the abstract satisfies the registrar of titles, he issues a certificate, and this certificate settles the matter for good. If the owner of the land wishes to borrow money on it, he need not pay an attorney's fee nor an abstractor's fee; the certificate shows the title to be good in him. If he wishes to sell, he simply endorses over the certificate.

The Torrens system is no new thing. It originated in Australia many years ago. It has been adopted in many parts of Canada, and in a large number of the states of the Union. It has been found satisfactory. It saves needless expenditure of money for attorney's fees and abstract fees. There is no reason why we should not adopt this system. We can have it, if the farmers of the state insist upon it. The way to get this is to see the various candidates who are running for the legislature now, and have a plain understanding with them before the primary. Let them say whether they are for the Torrens system or not.



SOLVING THE "MILKING" PROBLEM.

On many farms the question of milking is a problem. More cows would be kept if it were not for the question of extra help at milking time. The milking machine solves this problem. One man can milk 30 cows an hour with one of these modern "helps."





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Utah Horticultural Society, Utah State Dairymen's Association, Utah State Bee Keepers' Association, Bear River Valley Farmers' Protective and Commercial Association, Agricultural College Extension Department and Utah State Fair Association, Utah-Idaho Millers' and Grain Dealers' Association, Utah Fruit Growers Association.

#### OUR GUARANTEE

We guarantee every subscriber against loss thru dishonesty or attempted swindle by any advertiser in this publication. We do not attempt, however, to adjust trifling differences between the subscribers and honest responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within thirty days from date of the transaction, and the subscriber must have mentioned Utah Farmer when writing the advertiser.

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Plan a week or two for vacation. Take the family and go into the cool mountains, it will be time well spent.

Did you get a letter from us? If so we suggest that you accept of the splendid offer we made you and send us a check today to renew your subscription. We sent out a great many letters and appreciate the responses already received.

The daily papers have told us recently about two death from gasoline explosions. While cleaning clothes some carelessness was shown and serious results followed. If you use gasoline for cleaning do it out doors and away from any kind of fire or matches.

We want to help the Department of Agricultural to warn people against the buying of "fake" varieties of wheat and other seeds. The importance of good seed can not be over estimated but don't be caught buying "fake" seed of any kind. If you are in doubt about any of these firms or seeds write to the Experiment Station at Logan, Utah, or we will gladly help you.

The quality of your hay will depend partly on the time when it is cut. For good feeding do not let alfalfa get too old and woody. Cut when it is just coming into blossom, say when it is one-fourth in blossom. Do not cut more at a time than you are able to handle. When too dry, you lose the leaves and often it becomes bleached. Make hay while the sun shines but make hay so as to get the best results. Hay is going to be high

priced this winter, from the present outlook. Why not plant some quick growing grass and make feed of it this fall or winter. You may have some land that can be used for this purpose. You should act quick so as to get all the growing weather possible.

#### THE VALUE OF MANURE

The value of manure does not seem to be understood by many of our farmers. An expert who has made a study of this says that enough farm manure is wasted each year in the United States to build a fleet of one hundred dreadnaughts, or build two hundred fifty thousand miles of highway.

There is very little land but what needs manure, and it seems a crying shame that so much should be wasted when we need it for the increasing of the production of our crops.

#### STORAGE OF GRAIN

Every farmer should provide a way for grain storage so that he can hold his grain and sell it on the right market. Forced sale at harvest time is one of the reasons for sending the price down. Provide grain bins—grain storage of some kind; always make it as safe as possible from fire, insects, and other means of destroying the grain. Some farmers have saved the cost of buying storage devices in the increased price they have received from their grain.

If the farmers will organize, and have some co-operative way of selling their grain, it would materially help them in securing better prices.

#### CONFIDENCE IN-ADVERTISED GOODS

A concern that advertises has to be on the square, or it will go out of business. Every time a manufacturer puts his name on a product it really means his guarantee of that article. If he lives up to the guarantee he will gain the confidence of the customer, and no doubt that customer will buy again.

This same manufacturer must be honest in his prices or it will work against him.

Advertising is done largely to create confidence in your mind, as to the reliability of the manufacturer. The manufacturers spend large sums of money to gain your confidence, and it is not likely that they will sell you an inferior article, or disappoint you in the goods they offer.

The Utah Farmer is very careful, to see that only reliable people use its columns, and for this reason our readers can place confidence in all of our advertisers.

#### COST OF PAPER

The shortage of white paper in this country has caused our government officials to issue a bulletin, asking the people to be more careful in the use of paper, advising the papers not to put out extra editions; tells all the larger users to save all the waste paper.

Because of this shortage the price of paper has advanced, and extremely high prices prevail.

To show our readers how this advance has come home to us we have been trying to buy a carload of paper, and we will have to pay just double what we did a year ago. White paper is one of our big expenses because of the thousands of papers we print, when the price is doubled, it takes hundreds of dollars more to pay for the paper.

We are telling our readers about this because

we think they ought to know some of the changes that are going on with the cost of producing a paper like the Utah Farmer.

#### MONEY FOR GOOD ROADS

Congress has passed and the President approved, a law appropriating several millions of money for good roads. When the allotment is made for Utah we must put up an amount equal, dollar for dollar, and agree to abide by the rules of the new law for the spending of this money and maintaining of the roads.

The allotments of the federal fund to the different states will be made by the secretary of agriculture according to rules made by the new law. He must agree with the highway department of each state where the roads will be built and of what kind of material they shall be constructed.

The new law is very definite in order that there can be no politics in it, no favoritism, no interstate or trans-continental system can secure funds for roads without the backing of both state highway authorities and secretary of agriculture.

#### GOING TO BOOST DAIRY INTERESTS

The limited consumption of dairy products is largely due to ignorance of the food value of milk and other cow products.

Agriculture may be the biggest industry in the world but advertising is the most potent.

The dairy interests, through their national organization, are going to advertise dairy products on the nation-wide scale in order to increase the consumption of milk, cream, butter, butter-milk, cheese and ice cream.

Not only will it benefit the farmer by increasing demand, stiffening prices and combating misrepresentation and other unfavorable influences, but the consuming public will be benefited in health and purse.

Thousands of dollars will be spent to advertise dairy products. Utah is just now awaking to the possibilities of the dairy industry. Right now is the time to push it and in a few years we can be shipping rather than importing dairy products.

#### THE MOVIES

In some sections of our state, parents are awakening to the need of censorship of moving picture shows.

There are some moving pictures which, without doubt, are of the highest educational value, while others, sometimes called the most artistic productions, are filled with suggestive situations. The power of suggestion in the photo play has a wonderful influence on boys and girls, according to Professor E. S. Hinckley, Superintendent of the State Industrial School. He is quoted as saying:

"That 80 per cent of the boys and girls at the Industrial school got from the pictures their first irresistible impulses to commit serious offenses, and he traces all the late attempts to escape from the state institution to the escapes of prisoners, as shown on the screen, the method employed by jail breakers and plans to elude capture being following in minutest detail by the young fugitives."

We do not mean to say that all moving pictures are bad, but we do think that the people whose children attend the motion picture shows should work in connection with the proprietor to see that pictures of the highest order be given.



**ALFILARIA**

(Continued from page 3)

face of the soil, the number of tubers varying from three to a dozen, and single roots varying from two ounces to a pound in weight. A single seed stalk is thrown up which bears a large number of seeds. In the wild state reproduction is almost entirely from the roots, the new growth forming a cluster around the old ones.

**Habit**—The habits of the plant well suit it to hot and arid regions. It completes its annual growth in a few months, and the remainder of the year it shows nothing above the ground but dry and withered leaves and stalks. The tuberous roots, however, are fleshy and full of moisture and are capable of retaining their vitality through the hot and dry summers. The plant is, therefore, peculiar to the Great Basin and adjacent regions.

The young shoots appear above ground early in the spring and are in full bloom by the last of April. Before the last of May, it has matured its seeds and the plant above ground withers and dies.

**The Root**—The tuber-like roots are the commercial part of the plant, some are long and slender, others are nearly as broad as they are long. The color of the exterior is from reddish brown to almost black, depending upon the age of the root which gets darker as it grows older. The young roots are nearly white on the interior, but become dark yellowish red as they increase in age.

**Use**—Canaigre has been used for many years by the Mexicans both as a medicine and as a tanning material, but only of recent years has it attracted attention as an article of commerce. The large amount of tannin which the roots contain are apparently in solution in the cell sap. The sap gives a pronounced tannin reaction. The amount of tannin increases with the age of the root. The Arizona station analyzed a number of roots, the average giving 30.52% of Tannic Acid for one year old dried roots, or at least twice as much as oak or hemlock bark. The present principal sources of tannin used in the manufacture of leather from hides, at the Arizona Station, also it was estimated that six tons of green roots, would make one ton of extract tannin material, worth from forty to sixty dollars. From fifteen to twenty tons of green roots can be raised per acre. Not much cultivation is necessary, simply to keep the soil somewhat

loose. The crop is prepared for market by slicing and drying the roots either in the sun or by artificial heat not to exceed 110 degrees F.

**PROFIT AND NUMBER OF ACRES**

The size of business often has much to do toward making the farm profitable. Farm-management records show that farms are often either too small or too large for the most successful farming. There may be too few as well as too many acres. A man may not have enough land or he may be "land poor," thereby rendering all his acres unprofitable.

About 30 years ago a Wisconsin farmer with a large family was deeply in debt. His farm consisted of 120 acres, half of which was under the plow. The remainder was woodland and expensive to clear. For 12 years the farmer had not been quite able to meet his interest. To him the whole farm consisted of unprofitable acres. He finally decided that the farm was too small for the most efficient use of the labor available. Having an opportunity, he bought an adjoining 80 acres of cleared land, going in debt the full amount of the purchase price. From that time on the farm was prosperous, and in 10 years the entire farm was paid for and enough additional money saved to build a good house and barn. During this period there had been no great change in prices of farm products. The smaller farm had been unprofitable because the overhead expenses were too high for so small a business. In this case acres were made profitable by increasing their number.

In the early nineties a North Dakota farmer owned 3 quarter sections of land. His farm was quite heavily mortgaged and for a number of years he had not been able to pay interest in full. His family was small and for most of the work he had to depend on hired help. He concluded that under the circumstances he was working, or trying to work, too many acres. Finally he sold a quarter section and paid his debts. Seven years later he had \$5,000 in the bank. Increased prices of farm products during this period only account in part for this farmer's increased prosperity. In this case all the acres had been unprofitable largely because there were too many of them.—J. C. McDowell.

**ROTATION OF CROPS.**

Dominion of Canada Department of Agriculture give the following reasons why farmers should place their farms under rotation rather than continue the practice of haphazard cropping. The following are a few of the benefits resulting from crop rotation:

1. The general appearance of a farm is improved where each crop is confined to one large area.
2. Every field receives at regular intervals its fair share of manure and cultural treatment, therefore the whole farm is in a condition to ensure maximum yield.
3. Cost is lowered by the saving of time due to all work of a kind being in one field.
4. Fewer fences are required, which reduces expenses.
5. Larger machinery can be utilized more economically where fields are larger and fewer.
6. More live stock can be kept, which makes more manure available.
7. Profits and yields are increased.
8. The farmer is not dependent up-

on a single crop.

9. It permits of the more even dis-

tribution of labor throughout the season.

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Determines threshing profits. No matter how hard you work, if your separator doesn't run with greatest efficiency—if your engine is not capable of giving the surest service at lowest possible expense, a lot of your time is wasted and you are not making what you ought to make.

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## LIVE STOCK

### SHEEP HELPFUL ON

#### IRRIGATED FARMS

W. S. Cunningham, Arizona Experiment Station.

Sheep have proven valuable on irrigated farms for the purpose of keeping ditches clean, keeping down obnoxious weeds, and cleaning up the waste in fields after harvest. The main place for sheep is on the irrigation ditches. Those who have tried it claim that running sheep on the ditches will save enough labor in ditch cleaning to pay for double fencing of the ditches. The sheep feed on the weeds and Johnson grass that would otherwise mature and scatter seed over the farm. The wool and mutton produced are clear profit. Besides this the sheep is tramping over the ditches fill the gopher holes and thereby stop the vexatious and costly breakage of ditch banks.

Every irrigated farm should have sheep, not only because of their value as weed destroyers and ditch maintainers, but because of their value in improving the appearance of the farm. There are far too many unsightly ditches and fence corners overgrown with weeds, which are noted by the visitor and homeseeker. Certain communities are often spoken of as being progressive because of the clean, well cared for appearance of the farms.

It has been found that on the average about twenty ewes and their lambs can be maintained and fattened on the ditches and waste feed of each forty acres of land. Each ewe should produce a fleece worth \$1.50, and her lamb at weaning time should be worth \$8.00. Since the fencing is paid for by the saving of expense in ditch cleaning and the sheep are fed on otherwise worthless feed, they should show a splendid profit.

It is believed that Johnson grass may be eradicated from fields by pasturing with sheep. The Experiment Station has moved its experimental flock of sheep onto the new Experiment Station Farm at Mesa, and they are being pastured on a field badly infested with Johnson grass to determine whether it can be successfully eradicated in this manner. Investigations by the U. S. Reclamation Service have indicated that continued grazing of Johnson grass by sheep will kill it.

Owing to the extreme heat of summer some shade for sheep is most essential. Fortunately in most of the older communities there are plenty of trees along the ditches. When trees are not available some other shade should be provided.

### LIVESTOCK AND SOIL FERTILITY

F. B. Mumford, Missouri A. C.

The problem of the American farmer today is how to conserve the fertility of the soil and yet insure a reasonable income. In considering changing from grain farming to the raising of livestock, the farmer asks himself if this change has been successful in maintaining soil fertility. From the New England states westward to the Dakotas, he sees a trail of once depleted soils reclaimed by substituting dairying and stock farming for exclusive grain farming. The result of profitable systems of livestock farming on even the poorest of soils is to be seen in Holland. Denmark is an

other example of a country whose soils were becoming depleted by wheat producing but where a system of livestock production conserved the soil fertility.

Permanent success from exclusive grain farming has not yet been demonstrated, so modern farm practice is showing the importance of the development of animal husbandry. The close relation between the fertility of the soil and keeping of live stock is demonstrated at experiment stations and by the successful farmer. Productiveness of the acre of land is the main factor for which the farmer is everywhere striving. Because the productiveness of the land is maintained and often increased is sufficient reason for the keeping of animals on the farm, not even taking into consideration the increased profit from the livestock farm.

Farm manure is now, and always has been the greatest available resource for maintaining soil fertility on the typical middle-west farms. Generally speaking the most prosperous farms of this section today are those on which livestock is a large, if not a chief factor of production.

While the practice of plowing under clover and that of adding straw and stover directly to the soil will unquestionably keep up the humus or vegetable matter supply, such materials are too valuable for the nutrition of animals to be thus employed.

All such materials as stover, hay, straw, and grass can be profitably marketed through animals, and at least 50 per cent of their soil building value saved and at the same time a considerable profit secured from feeding the animals.

### CARELESS FEEDING AND

#### WATERING MAY KILL HORSE

Never Water Immediately After Feeding Grain Nor Allow Too Much Water When Hot.

Many horses are killed and many more are injured by careless feeding and watering.

Never water a horse immediately after feeding grain. This washes the grain through the stomach before it is properly mixed with the stomach juices and is liable to cause colic. It is safer to water the horse before feeding grain.

If the horse is very warm let him drink a few swallows and then hold his head up for a minute or two and thus cool his stomach slowly. Try it yourself in hot weather. You can drink a quart of cold water without injury if you but will take several minutes for the first few swallows.

When horses are brought in hot from their work they should first be given water cautiously and then fed hay and grain together, allowing them to exercise their own judgment in the selection of their feed.

While waiting for them at the watering trough, the time can be profitably used, in removing the harness, at least the collar, and cooling the shoulders by washing in cold water. Removing the hot harness, in a hot barn, during the hot noon hour, is a great relief to the horse and is really worth while.

When a horse becomes colicky or is

founded, from too much grain or cold water on a warm stomach, there is no one to blame but the one who had him in charge and it is he who must be charged with either ignorance or carelessness. Horses are worth money and their services are indispensable. Their care and management should be given more consideration.—Geo. H. Glover, Colorado.

### BARLEY FED HOGS.

The question is often asked can hogs be fattened on barley instead of corn?

The two grains are similar, as shown by the following:

	Total digestible nutrients.	Digestible Protein.
100 lbs. corn	84.1 lbs.	7.8 lbs.
100 lbs. barley	77.9 lbs.	8.7 lbs.

Corn therefore, contains about 8 per cent more of total digestible nutrients, but less digestible protein, and for general feeding corn is considered about 8 per cent more valuable than barley, pound for pound.

At the Washington Experiment Station a reeding test, in which five lots of shoats, which at the beginning averaged 125 pounds, were fed rations as follows:

- Lot 1—90 per cent rolled barley and 10 per cent tankage.
- Lot 2—90 per cent rolled barley and 10 per cent tankage (different brand).
- Lot 3—95 per cent rolled barley and 5 per cent tankage.
- Lot 4—Ground oats and field peas.
- Lot 5—Rolled barley.

The pigs were fed for seven weeks and then sold. At the time of the sale, the first four lots weighed from 190 to 225 lbs. per pig. Lot 4 made the largest daily gains, lot 3, the next largest and lot 2 next.

Lot	Grain Eaten for 100 pounds gain.
1.....	422 lbs.
2.....	419 lbs.
3.....	393 lbs.
4.....	393 lbs.
5.....	584 lbs.

These results compare very favorably with experiments where corn and tankage rations were used. Comparing lots 1 and 5 it appears that 42.2 lbs. of tankage replaced 204.2 lbs. of barley.

Barley alone is not sufficiently relished and does not contain enough protein. Milk or tankage may be fed with it to advantage. Good combinations are 90 per cent barley plus 10 per cent tankage, or 90 per cent barley plus 5 per cent tankage for older hogs; 1 pound of barley to 2 pounds of skim milk.

The barley may be soaked or ground with advantage, but tankage must not be soaked before feeding.

Corn and barley mixed are better than barley alone.

A man in order to be a good pig grower must like the work and be willing to look after its many details. No hog farm equipment is complete without good disinfecting utensils and they should be frequently used. The old saying that "Anything is good enough for the hog," is not true in these days of good farming. Stock raising for breeding purposes and that raised for market must be treated differently. Corn and alfalfa fed to hogs has been found to make a splendid combination in producing strong pigs cheaply. If sows eat the alfalfa hay there will be no trouble in securing healthy litters. Cooking feed for

swine has been abandoned since we have found that the digestibility of most food is lessened by cooking.

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**LICE ON HOGS.**

(Continued from page 3)

essary to pump or dip out the contents of the vat in order to clean it. Do not use old filthy dip, but clean and recharge the vat before dipping again if the dip has become very dirty or if it has stood a long time in the vat. The end where the hogs enter should be perpendicular and the entrance should be on a slide. The other end should slope gradually, with cleats to provide footholds for the hogs for emerging after dipping. A dipping vat is very useful wherever a large number of hogs are kept.

**Hog Wallows.**

Some farmers favor hog wallows; others are strongly opposed to them. Filthy hog wallows are a source of danger. Hogs wallowing in or drinking contaminated water are likely to contract disease. However, there are many advantages to be derived from wallows. A cool bath is very soothing to a hog during the hot weather. It cleans the scurf from the skin and protects the hogs from flies. Crude oil, sufficient to form a thin layer on top of the water, may be poured into the wallow about every ten days. This will tend to keep the hogs free from lice and other skin parasites. If the skin becomes irritated from the oil, its use should be discontinued. Small quantities of coal-tar dip are sometimes added to the water in hog wallows, but there is an element of danger in this practice, as poisoning may result from the absorption of phenols by hogs which lie in the wallow more or less continuously.

On some of the larger hog farms concrete wallows are becoming popular. The cement hog wallow should be located in a shady place and made so as to contain from 8 to 10 inches of water. A 2-inch drain pipe, as recommended for the dipping vat, should be placed in the bottom of the wallow to permit its being cleaned out.

**Other Methods.**

In many cases a farmer is not financially able to build a concrete hog wallow or a dipping vat. If this be the case, the dip, properly diluted according to directions, can be applied with a spray pump or sprinkling can, or else rubbed on every part of the hog by means of a brush or a swab of cotton waste. Care should be taken not to apply the dip stronger than directed.

Another method of controlling lice is to tie gunny sacks or similar coarse cloths around a post and saturate the sacks frequently with crude oil. The sacks should be tied at a proper height so that the hogs may rub against them.

**Change Pastures Frequently.**

Swine can be raised when they are confined in limited quarters if the quarters are kept clean, but they will do much better and stay in better health if they have plenty of pasture. Divide the pasture into convenient areas, so that the hogs can be shifted from one pasture to another. This not only provides fresh pasture, but affords an opportunity to disinfect the pastures by plowing and reseeded or exposure to the sun and weather. Intestinal worms, which are rather common in swine, are contracted from feed, water, and ground which have been contaminated by the droppings from infected hogs. Frequent change of pasture is one of the best means of reducing worm infestation to a minimum. Hogs, how-

ever, should not be allowed to run at large on open range, as this favors the spread of hog cholera.

**PREPARING PIG FOR FAIR**

Begin Early to Feed Up and Start With More Than You'll Need—Good Rations.

If the breeder desires to make a "show at fairs," he should begin early, and feed up. He should always feed up more than he expects to take, as some may get hurt or not "fill out" as he expects. By an early start, the hogs will shed off the old coat of hair, and the new growth will have come out nicely and present a smooth coat by showing time, and the flesh will be firm and solid. The best feed to start old or young hogs to fattening, is milk, ground oats, corn meal, rye meal, oil meal, and fresh clover, with plenty of pure water. Curry and brush the hogs daily; this makes them thrive better, keeps the skin healthy and soft, makes the animals gentle and improves the coat.

Sows that are to be shown should be bred late enough so as to farrow soon after the close of the showing season. It is the best and most natural way to reduce them. Show hogs should be well fattened, as poor hogs never take premiums and should not, for no man can tell how a poor hog will fill up. Hogs are raised for pork, not work, and in order to determine what proportions and symmetry they are capable of, they must be filled out and show their capacity to carry full flesh without breaking down.

If the coating is very rough, the hog may be clipped. It will help its appearance. The hogs should be taken out into a lot and driven about frequently, singly and in show herds, to accustom them to handling, and being together; this course will save much trouble and some profanity.

When you get to the fair, do not crowd too many hogs in one pen. Take them out mornings and evenings, and walk them around for exercise. Wash them with a good castile or ivory soap, rub dry and then oil with a mixture of sweet or castor oil, glycerine, and a little alcohol, if you wash at all. A good, vigorous brushing, twice a day, is about as good as washing, especially if the weather is cool. If the washing process is commenced, and water freely used it will be necessary to keep it up, as unless wet or oiled, the hair becomes dry and harsh.

If your animal looks best standing still, keep it still while under inspection on the contrary; if it shows best moving, manage to keep it moving while being inspected. In short, put your best foot forward, and if the animal has a better end or side view, maneuver it so as to keep its best appearance before the committee. Use the whip gently, and keep animals from becoming excited or angry.

Remember the statement of the farm machinery manufacturer. "If the farmer cared for his machinery as he should, there would be a need for us to manufacture but one machine where we are now putting out two."

No farmer gets rich by the quantity of production. It is the price he gets for his products and economy and business judgment displayed in management that makes the farmer wealthy.

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## THE HOME

### HOW TO PUT UP GOOD JELLY

Hannah Davis.

There are many reasons why we should take no chances on making our jelly this year. Fruit is not plentiful, price of sugar high, etc. Two questions are often asked "Why jelly does not harden" and "what causes the crystals to form in jelly." I can only answer these questions in a general way as many things might cause changes.

As to why jelly does not harden The fruit may be overripe, it may have been boiled too long, the fruit may not be the right kind or too much may be boiled at a time. There is a substance in all fruits, when ripe or nearly ripe, that is called pectin which is a carbohydrate something quite similar to starch in its properties, and it is this pectin that enables us to make jelly. Equal quantities of fruit juice and sugar heated to the boiling point for a few minutes brings about a chemical change which causes the pectin in the fruit to gelatinize the mixture and jelly is the result. Pectin, pectose, pectase all come from the Greek word, meaning to coagulate or curdle. Through certain changes the pectic acid is made to form a jelly mass instead of curdling things. Pectose and pectase are always in unripe fruit.

Pectose is supposed to form the bulk of vegetable jelly the elemental qualities of which may be equal to the starches. Pectase is a substance present in the juices of plants. As fruits ripen the pectase acts on the pectose which cannot be dissolved and changes it so that it can be dissolved changing the pectose into pectin. Now the important point for the jellymaker to remember is that this pectin is always at its best just when the fruit is over ripe, a little before. If the fruit is over ripe, if it begins to ferment a bit, if the jelly is cooked too long then the pectin undergoes a change and loses its power to gelatinize and the jelly does not harden. Choose fruit that is just ripe or a little green and you will have better success than with the overripe fruit.

#### When Pectin is Needed

The amount of pectin changes in the different fruits just as sugar does. In the strawberry, for instance, the quantity of the jelly-making pectin is so small that it is difficult to make jelly from strawberries. Apples or currants may be added to make a jelly in which some of the flavor of strawberries may be obtained. Indeed I have always found that to get good results with peaches it is better to add apples or grapes. The peach is often given in jelly-making lists, but I would advise new jellymakers to let the peach alone at first or use it with something else that is easy to make jelly from. If you chance to have some currant juice canned add a fourth proportion of that. The best fruits for making jelly are: Currant, crabapple, apple, quince, grape, blackberry and raspberry. If you wish to have success with cherry jelly add currants or apples if you want real jelly. Of course, some of the cherry flavor will be lost.


Many housewives prefer to make jelly from juicy fruits such as currants, raspberries, blackberries and grapes without adding any water when

cooking the fruit to extract the juice. They mash a little of the fruit in the bottom of the kettle first and then put in the rest of it. The kettle is placed over a low fire and heated gradually so that the juice will be extracted enough to cook the berries or currants. Other housewives say that they add a little water to start the fruit cooking. I find from experiment that this works very well, particularly with currants, provided the jelly is cooked in a way that I will discuss later. Indeed my experience is that I had more jelly and with a more delicate flavor.

The proportions were one pint of water to four quarts of currants. The currants were looked over, leaves and imperfect currants removed. The fruit was washed, drained and then placed in an agate kettle with a pint of hot water poured over them. The fruit was cooked rather slowly until it was soft and then it was thoroughly mashed with a potato masher. Then it was poured in a jelly bag made of coarse muslin and allowed to drain overnight. The next morning the clear juice was taken and cup for cup of sugar added. When the sugar had dissolved, or almost so, it was put over the fire and heated gradually to the boiling point, where it was allowed to boil gently from 10 to 15 minutes. I tried it by dipping a teaspoon of the mixture on a cold plate and when I found that it rolled up from this plate, that is when it showed that it was jellying, I poured it onto the jelly glasses and set away to cool.

But I only cooked a little of it at a time. And it is to that fact that I ascribe my success. Indeed, cooking a little at a time is one of the things that I consider essential in making fine jelly. I never put more than three cups on to cook in one kettle. When I am making a good deal of jelly at one time I have found it necessary to keep two or three kettles going at once, which may be done without difficulty, by starting one a few minutes later than the other. Then the skimming off of the scum that rises to the top and the testing on the plate may be done one kettle after the other. The jelly glasses should be sterilized, dried and kept hot to avoid ferment and mold later.

About the crystallization there are two points to consider. There may be too much sugar in proportion to the juice, or the jelly may have been boiled too hard. Some fruits have more sugar than others, currants for instance have four or five times as much sugar as the peach. Yet to the taste, peaches seem much sweeter than currants. Grapes have the most sugar of any of the fruits and grape jelly is more apt to have crystals form than other fruits. Another factor that comes into jelly-making is the weather. In hot, dry seasons with plenty of sunshine, the fruits, particularly berries, have more sugar than usual and this should be taken into account when measuring the fruit juice and sugar. The usual rule is pint for pint, or cup for cup. And that rule should be followed this year because we are having a cold wet season without a great deal of sunshine. If on the other hand, we had little rain, plenty of hot weather, it would



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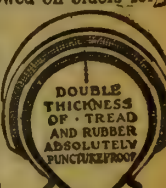
Tires Tubes	Tires Tubes	Tires Tubes	Tires Tubes
30x3 in. \$ 8.60	32x3 in. \$ 12.45	34x3 in. \$ 17.45	36x3 in. \$ 21.20
30x3 1/2 in. 10.85	32x3 1/2 in. 14.75	34x3 1/2 in. 19.75	36x3 1/2 in. 23.60
32x4 in. 12.75	34x4 in. 16.75	36x4 in. 21.75	38x4 in. 25.60
34x4 in. 15.75	36x4 in. 19.75	38x4 in. 24.75	40x4 in. 28.60

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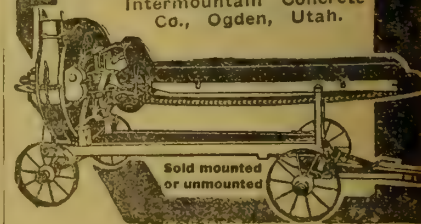
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Mention Utah Farmer when you write.



be better to use less sugar, i. e., to each pint of juice add a good three-quarters pint of sugar. Sometimes too rapid boiling causes the particles of jelly to be thrown up on the sides of the kettle where crystals are formed and then either pushed down into the kettle or fall down, and these crystals later will start others to form. To avoid crystals measure the sugar carefully and take care to have the jelly boil slowly.

#### COCOANUT PIE

One pint milk,  $\frac{1}{2}$  pint cocoanut, 1 egg,  $\frac{1}{2}$  cup sugar, 1 tablespoon cornstarch. Place milk on stove in boiler, add cocoanut and sugar mix cornstarch in some of the sweet milk, beat egg altogether and mix with cornstarch. When ingredients on stove boil, add egg and starch and stir till it thickens. Pour in crusts. Beat white of egg and put on top of pie, brown.

#### CHOCOLATE PIE

Four tablespoons chocolate, 1 pint boiling water, cook 3 minutes, then take yolks of 2 eggs, 2 tablespoons corn starch, and 6 tablespoons sugar, mix all together and boil till thick. Bake with one crust, beat whites of eggs to a stiff froth for top.

To prolong the wear of pillow cases made from tubing—When partly worn cut off the seam from top and pillow cases can be turned half way around, thus making wear come where outside edges were.

#### SUMMER FOODS

(Continued from page 3)

per pound or scarcely any fuel value. The fuel value of the two would be as high per pound as that of any raw cereal, and this is always increased by a mayonnaise, which is a condensed food hardly less than 4,000 calories per pint.

If we study the composition of foods we learn why a given bulk of one contains so much more than the same bulk of another. A pound of shelled Brazil nut is almost equal to butter 5.3 per cent of water, while a porterhouse steak contains 60 per cent, a kind of water that we know contains practically no nutriment and is far from being sun distilled as in fruits. Fat is always a condensed form of food, and the Brazil nut contains 66.8 per cent of fat, while the porterhouse steak has only 20.4 per cent. The

Frazil nut is almost equal to butter extended by a few solids, since butter as purchased contains only 85 per cent fat.

We eat meat to get something to repair and build our muscles. The protein in any food does it. But the porterhouse contains only about 20 per cent of protein, while the Brazil nut has 17 per cent and the peanut over 25 per cent protein.

Nuts are splendid food if eaten intelligently by those who can digest fat with ease. But many a child after a picnic is a subject for the vile and always deplorable castor oil treatment because he has eaten too many peanuts and sugary things. The latter have on an average but half the caloric value of nuts, but five times that of the average fresh fruit or seventeen times as much as a melon. Of course, that makes the nuts thirty-four times as heavy as melon. Normal eating and all that goes with it should be as natural as breathing, but extremes, either one way or the other, involve periodical dosing and often permanent abnormality.

Most people are guided by the quantity system in their eating. The caloric system is only another, but more specific, quantity system with some defects since quality is a finer thing, but an understanding of this system is the only thing that will ever keep great hordes of people from overeating.

Notice the caloric relations in the following four food groups:

#### FATS AND NUTS

Name.	Calories per pound.
Butter .....	3,605
Lard .....	4,010
Almonds, edible portion.....	3,030
Peanuts, edible .....	2,560
Peanut butter .....	2,825
Pecans, edible portion.....	3,455
Walnuts, edible portion.....	3,300
Cheese, American scale.....	2,055
Whole milk .....	325
Skimmed milk .....	170
Unsweetened condensed milk.....	780

#### STARCHES AND SUGARS.

Granulated sugar .....	1,860
Home made bread .....	1,225

[Practically all sugars and starches have a caloric value between these two figures.]

#### MEATS, FISH AND EGGS.

Sirloin steak, edible portion.....	1,130
Veal cutlets, edible portion.....	690
Lamb, hind quarter edible portion.....	1,055
Neck of lamb, edible portion.....	1,245
Smoked lean bacon edible portion.....	2,085
Cod, whole, edible portion.....	325
Halibut steaks, edible portion.....	568
Whole salmon, edible portion.....	950
Hens' eggs, edible portion.....	720

#### FRUITS AND VEGETABLES.

Raw potatoes, edible portion.....	885
Cooked asparagus .....	220
Dried Lima beans, uncooked.....	1,625
Green string beans .....	195
Fresh cooked beets.....	185
Cabbage .....	145
Raw carrots, edible portion.....	210
Green corn .....	470
Kohlrabi .....	145
Lettuce .....	90
Green peas .....	465
Dried peas .....	1,655
Tomatoes .....	104
Cherries .....	365
Bananas .....	460
Grapes .....	450
Oranges .....	240
Strawberries .....	180
Watermelons .....	140

Note that by eating vegetables without butter, one can get least of the food that leads to overheating and fat. Fruits come next, or in some cases lower, and butter is not usually added to them as to vegetables, although cream is. This rating does not include dry fruits. Meats are lower in fuel value than breads, and the highest of all are the foods containing much fats, and the nuts are in general higher than the fattest meat—bacon.

I should say not!



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"Our New Perfection Oil Cook Stove saves her strength—is as easy and clean to use as gas—no odor, no smoke.

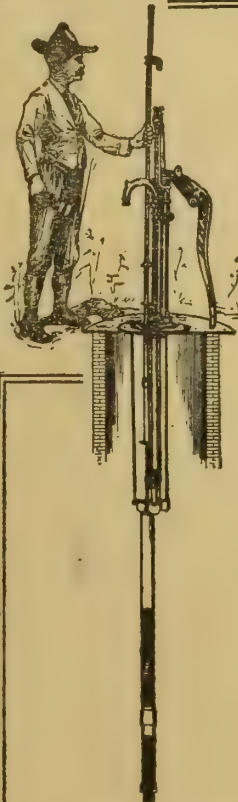
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Look for the long blue chimney. New Perfection Oil Cook Stoves are sold in many models at hardware and general stores everywhere.

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## Improving The Lawn

Timely Hints on Care and Management of Old Lawns—Treatment of Weeds.

Improving an old lawn is a very much more difficult problem than establishing a new one. In many cases it is impracticable to attempt the improvement of an old lawn that is in bad condition. However, if a reasonably good turf obtains, it is possible to better it materially by reseeding, fertilizing, and watering. In the majority of cases, improvement is desired in the spring, since at this season many bare spots are in evidence as the result of the preceding winter. If the areas to be improved are small, they can be handworked and reseeded with little difficulty. If they are large, it is usually advisable to spade them up, work thoroughly, and seed, as in the case of starting a new lawn. In any event reseeding should be done early in the spring with a liberal quantity of good seed mixture.

When the stand of grass is thin over the entire lawn or a greater portion of it, a special seeder equipped with small disks has been found very satisfactory for cutting the seed into the sod and thereby producing favorable conditions for germination and subsequent growth. In the early spring, however, the soil is usually loose as a result of the freezing and thawing and is in sufficiently open condition to permit the seed to be covered with little difficulty. After seeding, if the ground has become quite dry, rolling is usually beneficial. Care should be taken when mowing or watering the newly seeded areas to avoid disturbing the young grass. This caution always applies in a measure to fall seeding, although there is not so much danger of damage in this way at this season.

### Fertilizing.

The management of the lawn after it is once established is an extremely important matter, and there are a few general practices that should be followed carefully. Beginning in the early spring, the first thing to do is to remove with a rake the top dressing that has been applied the fall before. After removing this it is usually advisable to apply some fertilizer, even though the soil is already reasonably fertile. One of the very best fertilizers for the lawn in the spring is nitrate of soda, but on account of its quick action and its caustic effect extreme caution should be used in its application. Five pounds of nitrate of soda are sufficient for 1,000 square feet of lawn, and if applied in solution with the watering pot and the grass then thoroughly watered with a hose, there is little danger of scalding. Bone meal is probably the best commercial fertilizer to use on a lawn, considering the danger from the misuse of nitrate of soda. Bone meal can be used without taking any special caution in its application, as it is in no way injurious to the grass. Eight pounds to 1,000 square feet is a liberal application. Any commercial fertilizer that is used should be applied early in the spring, when the grass begins to grow. In fact, bone meal can be used to advantage every month during the growing season, except perhaps July and August. Fertilizing through the season is especially beneficial in keeping the grass stimulated at times when it

would otherwise be more or less inactive. Pulverized limestone as a top dressing is very helpful, and an application of this substance can be made either in the fall, winter, or spring. Lime corrects the acidity of the surface soil and is useful in checking the growth of moss and various other plants that are detrimental to the grass.

### Mowing, Rolling, and Sprinkling.

There is no hard and fast rule to be followed in connection with mowing the lawn, but clipping twice a week is not apt to injure it, and will induce the formation of a good turf. Too frequent clipping, however, is a drain on the vitality of the grass and frequently results in permanent injury.

There is some difference of opinion as to whether clippings should be removed after mowing, but in general their removal is advised, especially during wet weather, since if left to lie on the surface they are conducive to the growth of molds, which in turn produce injury to the turf. On new seedings, however, or where the grass is thin, clippings can frequently be allowed to remain with benefit.

New seedings should not be clipped closely, and during the hot weather of midsummer and early fall the mower should be set high for old and new grass alike. The roller should be used discreetly. New grass is frequently benefited by a light rolling after the first cutting. Old sod should be rolled in the spring to firm the surface that has been loosened by freezing and thawing, but during midseason it is very doubtful if the lawn should be rolled even lightly, especially where the soil is of a heavy nature.

There are probably more mistakes made in connection with the watering of the lawn than in any other phase of its management. The practice of sprinkling as it is almost universally followed is fundamentally wrong, not that the sprinkler does not furnish enough water to the grass during the season but that it does not furnish it in properly distributed quantities. Sprinkling for a short period may appear to wet the sod thoroughly, but in reality the water does not penetrate much below the surface. This encourages the formation of surface roots and makes the grass less resistant to the severe conditions of weather and usage.

Except in rare cases, the lawn should not be watered oftener than two or three times a week, provided watering is done properly. A thorough soaking is necessary and should be given in the late afternoon or early morning. The ordinary type of revolving spray is quite satisfactory, but the amount of water applied by it is usually much less than appears. The point to be borne in mind is that the ground should be thoroughly saturated at each application to at least 3 inches in depth. **Eradication of Weeds.**

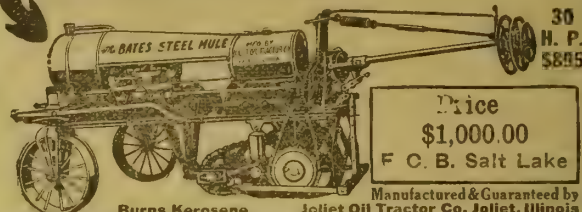
While weed enemies of the lawn are troublesome throughout the growing season, they are particularly so from the latter part of June until frost. During this period crab grass is by far the worst weed present. There is no really satisfactory method of checking its growth, and the only treatment to be recommended is to cut or pull the plants before they have formed large mats. This is a very tedious and expensive practice,

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but where a good lawn is involved the results justify the expense. Rational fertilizing and careful watering during the summer help to overcome the effect of weeds. Chemical sprays or treatments have proved to be of very little assistance. Much difficulty is experienced in cutting crab grass with the ordinary mower on account of its semiprostrate character. This difficulty can be overcome to a certain extent if a rake is used in conjunction with the mower. By means of the rake the branches of the grass may be lifted so that they can be clipped reasonably close. It is almost impossible, however, to cut crab grass sufficiently close to prevent the formation of seed.

There are many other weeds that are troublesome in the lawn not only in the spring but also in the summer and autumn. Among the most important ones are dandelion, plantain, chickweed, oxeye daisy, and yarrow. While chemical sprays are more effective in the eradication of these weeds than in the case of crab grass, the best method of preventing their development is to remove them with a spud or similar implement.

The weed problem can perhaps best be solved by making the conditions as favorable as possible for the lawn grasses and by maintaining a strict watch at all times to check the growth of the troublesome weeds at the beginning.



At the end of the growing season before the severe weather of winter arrives the lawn should be given a good top-dressing of well-rotted barnyard manure. If the manure is not well rotted, it is likely to introduce an abundance of weed seeds, which will ultimately cause considerable trouble. Top dressing not only adds fertility to the soil, but gives the grass protection during the severe weather of winter and the freezing and thawing of early spring.

### PNEUMONIA

Prepared by the U. S. Public Health Service.

Ten per cent of the deaths in the United States result from pneumonia. It is estimated that during the past 30 days this rate has been doubled in some sections. Tuberculosis and heart disease, each causing one-ninth of all fatalities, are the only diseases which outrank pneumonia among the legion of the men of death, but in certain cities pneumonia is steadily increasing and even has surpassed the mortality from tuberculosis. Seventy per cent of all cases occur between December and May. It is distinctly a cold weather infection, seemingly brought by wintry blasts, but especially prevalent during the winter season only because its victims are rendered more susceptible at that time by exposure, debilitating influences, and the presence of predisposing infections.

Pneumonia principally affects those at the extremes of life, but no age is exempt. It is invariably a germ disease. The predisposing and exciting organisms are so numerous that it would be futile to attempt their enumeration. Many of them are constantly present in the mouths and throats of healthy persons, and it is only through the aid which we unwittingly extend to them that they are transformed from harmless organisms to one of man's most powerful enemies.

The presence of other diseases is the great predisposing cause of pneumonia. They prepare the soil for invasion. Holding first rank in this category is influenza, the increased incidence of pneumonia at this time being largely due to the present epidemic of the grip. Individuals suffering from this infection are peculiarly susceptible to respiratory complications and should properly observe every hygienic rule. Inflammation of the upper air passages, pharyngitis, bronchitis, and tonsillitis, often predispose to the development of the disease, particularly among the aged and infirm. The acute contagious diseases of childhood, more especially measles and whooping cough, frequently prepare the way for pneumonia. Anyone who through neglect or carelessness permits the spread of these infections is therefore open to the severest condemnation. Exhausting disease of whatever nature is often sufficient to so reduce our resistance that we are unable to cope with organisms which should be easily overcome, and hence predisposes to the infection.

Debility, either temporary or chronic, developing from any cause, increases susceptibility. Because of this the disease most often attacks those at the extremes of life. Among debilitating influences must be mentioned cold, exposure to penetrating winds, and the chilling of body surfaces as a result of wetting. The combination of lack of food and fatigue proves particularly disastrous during the winter season,

and is a condition to be avoided whenever possible. Bad housing, mental or physical harassment, and overwork are alike the advance agents of the infection. Overcrowding in street cars, theatres, and other public places is unquestionably in part responsible for the spread of pneumonia in cities, as far greater opportunity is thus offered for the dissemination of the predisposing diseases through indiscriminate coughing and other means of droplet infection, as well as the directly injurious effects which inevitably result from exposure to such environment. The overheating of rooms is also seemingly harmful. Promiscuous expectoration may be, and probably is, a factor in infection, and consequently should be avoided by every citizen. A remaining most important agent should be mentioned—alcohol. It is in truth the handmaiden of pneumonia, and there is none more certain or more sure of success, especially if liberally and continuously used.

It is known that pneumonia frequently attacks those who are perfectly well and who apparently have observed every hygienic rule. Whether this is due to the increased virulence of the organism or to other causes is unexplained. It is, however, recognized that avoidance of the factors so briefly enumerated will in large part diminish individual susceptibility and therefore the incidence of the disease.

### HOW TO BRIDGE GRAFT

(Continued from page 2)

will aid in drawing the cambium of scion and trunk closely together.

The operation is completed by thoroughly covering the area occupied by the ends of the scions and the margins of the wound with grafting wax, strips of waxed cloth, or by some other means that adequately will prevent these parts from drying out. Some operators cover the entire wound, scions and all, with melted wax. Where the bridged portion is below or near the ground, many operators conserve moisture by covering the grafts with earth.

#### Bridging from the Ground.

Where the wound is so large as to make ordinary bridge grafting impossible, another method of bridging may be used. Two-year-old trees are planted about the base of the injured tree and their tops grafted into its trunk above the girdled space, which has first been cleaned as in the other method. As the tops of the small trees are too large to manipulate readily in the manner described for scions, V-shaped vertical grooves extending through the cambium are cut just above the wounded area in the bark of the tree to be treated. The tops of the small trees are shaped to correspond with these grooves. The two are then accurately fitted together in such a manner as to bring the cambium of one into contact with that of the other. Small nails may be driven through the tops of the trees into the trunk, to hold the parts firmly together. The wounds incident to joining the tops of the small trees to the trunk of the large one should be well covered with wax, to prevent drying out. Sometimes cord is tied around the trunk to aid in holding the tops of the young trees in proper position.

Soil that is poorly drained suffers more in both dry and wet seasons than that which is well drained.

## The Distinctive Loaf

Think what flavor; what nutriment, and goodness, a blend of four to five grades of the highest grade flours, such as are used for



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For economy, safety and satisfaction, this should be your bread. Baked from crust to center.

**Royal Baking Co., Salt Lake City, Utah**

### GRASSHOPPER POISONING

In many sections of the state there seems to be some trouble with grasshoppers. Poisoning has proved to be one of the efficient methods of destroying them. The following directions are given for using the poison bran treatment:

The mixture consists of 21 pounds bran, 1 pound Paris green or white arsenic, 2 quarts stock syrup or molasses, 3 oranges or lemons, 2½ gallons water. The bran and poison should be thoroughly mixed while dry, care being taken not to breathe the poison. Then the water, syrup and fruit juice should be mixed together and the dry bran sprinkled with the mixture, not wet, but simply dampened until the poison will adhere to the particles of bran.

This mixture should be sown broadcast wherever the hoppers are. This amount is enough to scatter over four acres. The best time to sow it is late in the afternoon and early in the morning. It takes two or three days after sowing the poison before the grasshoppers die."

### WORMS ON CABBAGE

Marysville, Utah.

Utah Farmer:

Gentlemen:—Will you kindly publish in your next issue, the answer to my question, which is this:

What to put on cabbage plants to kill those large green worms, called in some places, Tobacco worms?

Thanking you in advance,

I am yours respectfully,

B. T. Ashby.

E. G. Titus, Entomologist, U. A. C.

The real tobacco or tomato worm is a large green worm with dark markings and can best be controlled by hand picking. There is, however, on the cabbage a common green cabbage worm. That later turns into a

white butterfly. These worms eat into the leaves and finally may spoil the head of the cabbage. The best method is to spray with Paris green mixed with flour or air slacked lime, or even with road dust where flour is not available. The material may be placed in two gunnysacks and a man or boy working down two rows can shake it over each plant and thus dust on a little poison. This spraying may be continued up to within two weeks of picking time with safety, providing no seriously injured heads be used.

### GETTING RID OF ANTS

Harold R. Hagan.

If you can find the nests of the ants outside the house the easiest way to rid your place of them is to pour a little carbon bisulfide into the opening of each nest and close the nest by scuffing some dirt over the opening. If the nests cannot be found the ants may be poisoned by soaking some sponges in the following solution:

Sugar ..... ½ pound  
Water ..... 1 pint  
Arsenate of Soda ..... 62 grains

This mixture is boiled and strained and after cooling the sponges are moistened in it. Place the sponges in the runways of the ants.

Carbon bisulfide is HIGHLY EXPLOSIVE and must not be used in connection with fire or light of any sort. The arsenate of soda is extremely poisonous to human beings and other animals and must be kept out of reach of everything except the insects you wish to eradicate.

No one seems to be very liberal. Don't you know a stingy story on nearly all your acquaintances?

I have wronged myself oftener than others have wronged me.



## CARE OF POULTRY

(Continued from page 3)

hopelessly stunted by lice upon their heads or under the wings. Two or more head lice are fatal to a chick, the number depending upon its vitality and its age.

Remedies.—Except in extreme cases the bulk of hen lice will be found upon the fowls themselves. When it becomes necessary to rid a building of them, the procedure suggested for mites will do the work. Even air-slaked lime will kill such lice as it comes in direct contact with. It can not be depended upon to kill nits. The lice powders offered in the market are all compounded with the primary object of smothering the louse, since it breathes through its pores and dies of suffocation in a dust storm. This is the theory which the hen acts upon when she dusts herself. As a theory it is quite correct; in practice the dust storm needs to continue long enough to make sure that a gust of fresh air dies not, in a nick of time, revive the sinner. Any oily substance, such as melted lard, olive oil, meat drippings, etc., will close the pores and kill the louse, if it touches it. It is not at all certain that either oil or powder will kill the nit or egg of the louse, and it is here the ineffectiveness of such remedies lies.

To dust a hen, grasp her with the left hand by the legs, hold her with her head down and just touching the ground or table. In this position a fowl will flop its wings and all the feathers fall open to receive the powder, which should be thoroughly rubbed into the fluff clear to the skin with the free right hand, or dusted in with a small powder gun. It is work of not more than a minute to thoroughly dust a hen. The lice are most numerous around the vent, over the thighs, under the wings and on the

head. They will be found hidden in the fluff or burrowing under the skin. It is by contact only that the powder kills. Keep the powder out of the eyes, nostrils, and lungs of the hen. For this reason, if one values his birds and their health, he will not put them in a barrel or cylinder and revolve them in a cloud of dust. Such a proceeding will kill the lice, not the nits. It will work a decided injury to the bird. It is necessary to repeat the dusting at intervals of eight days to kill the nits that hatch meanwhile. If you plan to keep your hens free from lice, you must make up your mind to frequent repetitions of the process. Use the powder freely. If a cloth or other receptacle is placed under the bird to be dusted, you can easily take up the powder that would otherwise be wanted, and use it again and again.

How about the dust wallow? Very attractive dust baths in sunny places attract part of the hens of a flock, but in most cases the lousiest bird of the flock, which is generally the male, fails to avail himself of its privilege. This is especially true if air-slaked lime or sulphur or finely-sifted ashes be added to increase the efficacy of the bath. More hens will be induced to wallow in the dust bath if it is kept just slightly moist. For dusting those hens which fail to dust themselves, various commercial lice powders are offered in the market at 25 cents per pound. Pyrethrum powder is not poisonous to fowls, and is effective and cheap if bought in bulk. Tobacco dust, air-slaked lime, finely pulverized sulphur, brick dust, soot, naphthalene flakes, and finely ground corn meal are all ingredients used in the various mixtures.

Below are two formulas for home-made lice powders, both of which are cheap and effective: 1.—Mix three parts of gasoline with one part of crude carbolic acid—90-95 per cent strength, or with one part of cresol, adding gradually and stirring in enough plaster of paris to make, when the liquid is uniformly distributed through the mass of plaster, a dry, pinkish, brown powder, having a fairly strong carbolic acid color, and a rather less pronounced gasoline odor. As a rule it will take about four quarts of plaster of paris to one quart of liquid. Carbolic acid is poison and will burn the hands, if it touches them. 2.—Mix thoroughly three-fourths of a pound of naphthalene flakes, which have been finely pulverized, with three pounds of ground sulphur and one pound of tobacco dust. Add to this mixture twice its bulk of cornmeal and thoroughly stir.

Fowls may also be freed from lice by dipping them in a 5 per cent solution of creolin, creso dip, or zenoleum, or a tea made by pouring boiling water over tobacco stems. Utmost care must be exercised to protect the fowls from chill after dipping. Because the process at its best is ruinous to plumage and hard on the bird, the writer does not recommend dipping.

Blue ointment is frequently recommended as a remedy for lice. There are on the market certain commercial preparations in the form of a salve, which free the birds from lice and keep them free from three to six months or even longer. The directions for their use are the same as

(Continued on page 15)

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Wild Roses, A Tale of the Rockies—Howard R. Driggs. \$1.25. By mail \$1.35.

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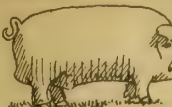
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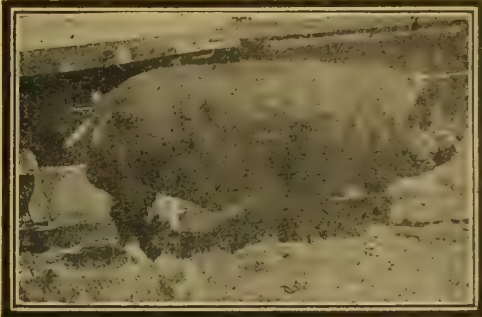
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### CARE OF POULTRY (Continued from page 14)

for blue ointment. Apply a piece a little smaller than a garden pea to the bird's skin directly under and around the vent. With blue ointment it is absolutely essential to keep the birds dry for several days after applying, or there will be lame birds if not dead ones. These commercial preparations are guaranteed under the Insecticide Act of 1910—Serial No. 973, and in accordance with that act there is published on the label the inert ingredients. The writer personally has observed the use of one such preparation for over a year without noting the slightest injurious effect. It is well, however, to bear in mind that all of these preparations contain poisons and to err on the side of caution always in their use. Never use them on young stock, especially day-old chicks. With chicks, prevention is better than cure, but where a cure is needed, nothing is

safer than olive oil. Lice go to the nostrils or the vent for moisture, and if head and vent are encircled with the oil, a trap is set which will catch the lice. In treating day-old chicks, use the least possible amount of olive oil and apply it just before the chicks go to sleep for the night to prevent chilling.

In conclusion, it might be pointed out that for the extermination of both lice and mites there is a variety of methods. The vital thing is thoroughness and care in the application of the material used and the repetition of the process at such intervals as will kill the newly-hatched pests before they mature and reproduce their kind. With birds and premises once free from vermin, the methods should be preventive and the cleanliness of these is every-day cleanliness.

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VOLUME XII; No. 52

LEHI AND SALT LAKE CITY, UTAH

JULY 29, 1919



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# Volume Twelve Index

For the aid of our many subscribers who have kept a file of the past year's copy we are giving in this week's issue an index covering the past twelve months. Short items and editorials that did not have a heading have not been included in the index.

We suggest that all keep each copy of the coming year, and at the end of the volume we will give an index of it.

We have a limited number of each copy of the past volume and will be pleased to supply anyone, as long as they last, to those who desire to complete their volume and have same bound. If you desire we can have them bound for you.

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# Building of Public Roads

Manen Allen.

I have seen it stated somewhere that "The road is so necessary an instrument of social well-being that in every new colony it is one of the first things thought of." Our forefathers, in order to reach the points where they settled, were compelled to mow their ways through pathless forests; with undaunted courage they pushed on into unexplored country with nothing to guide them. It would be, to say the least, ungracious of us to criticise these pioneers for not properly locating the roads which they were compelled to construct before they reached the sites of their future homes, or the location of the more local roads which they built later. The condition under which they labored were quite different from those of today. Self-preservation is the first law of nature, and it was vitally necessary in the old days to travel the routes which were safest, the routes from which attacks could most easily be warded off, in addition to those which would be dryest. The question of alignment or of grades was of little importance in those early days, but with us it is different; it is no longer necessary to be constantly on the lookout for nearly, hostile neighbors, and with our present day ability to surmount drainage difficulties we should build our roads around rather than over the hills. We have reached the point where we can appreciate the necessity and are able to plant for the future. When you take up the study of your highway problem, do it remembering always that the solution is not for today, but, as nearly as may be determined, for all time. Lay out a definite program, which, because of its reasonableness, will convince all that it is correct; and then adhere to it. If a program acceptable to the people is adopted, it is likely to be carried out; but, to be acceptable, the program must be clear in intention and unmistakable as to operation.

Comparatively speaking, the West is young—just starting out in life, older sections have gone through the school of experience and paid heavily for it. My advice to you is to profit by the experience in road building that others have paid for and by so doing avoid making mistakes that have been proven time and again to be mistakes.

For an economical and efficient conduct of your road work, you must have not only an approved plan of procedure, but an efficient organization to carry it out. An efficient organization will insure for you the greatest amount of first-class work for the least expenditure, and to accomplish it requires direction by a

competent man. You should secure for this purpose the very best highway engineer procurable; place him in unhampered charge of your highway work, and expect him to produce results. Before employing a man as your highway engineer, ascertain where he has done work, then go there and inspect it; the necessity for the proper conduct of your highway work is too great, and you can not afford to have an inexperienced man in charge of it. I have been on construction work where the cost of ordinary earth excavation was 60 cents a cubic yard, and I have been on precisely similar work where the cost was under 20 cents a cubic yard. The conditions were identical with this difference; one job was in a county where the road work was in charge of a man who did not understand his business, and the other was managed by an experienced road builder. In the moving of 100 cubic yards of earth in a day, experienced direction did the work of \$40.00 less. Do you not think it paid in this instance to employ the man of experience.

After having secured proper direction, I think the first consideration, in every case, should be the care of existing roads. Those may be poor, but they are all you have for your use at present, and should be taken care of until you can build better. You should take such care of all your traveled roads that each year they shall be a little better than the year before. Never permit deterioration. The value of farm property is proportional to the length and condition of the road to market. Deterioration in road condition results in decreased farm values. If the road is a very poor earth road, you may increase the value of the farm on it by improving the condition of this earth road. You may increase the farm value still more by substituting a higher type of road, but this substitution of a higher type must be preceded by an exhaustive study.

As before stated, the first thing to be done in every case should be the employment of a competent highway engineer to take charge. The first work of this engineer should be the preparation of a comprehensive program for submission to and approval by the proper local officials. This program should provide first for the care of existing roads. There should be a map prepared showing all of these and an inspection made to ascertain the condition of each, and an estimate of the cost of caring for each. The roads shown upon the map should be divided into units or sections of suitable length—perhaps five miles

each—and suitable designations made for purpose of identification. The map should have drawn upon it a table showing each of the roads and the sections into which each is subdivided, and in reports on conditions of roads, requests for money to do work upon them, reports of expenditure of money and work done, and in the keeping of accounts, the name and sections as shown on the aforesaid map should be used. This map should be submitted to the proper local officials in the form of a report, which should also show just what implements and materials are on hand, their condition and approximate value, what should be purchased and the probable cost, the working force needed to do the work properly, and in detail how much it is proposed to pay this working force. This report should be published, in order that taxpayers may know what is being done. They are to provide the money and should know how it is to be spent. A system of bookkeeping should be installed where such an account of all expenditures is kept that any taxpayer may ascertain at any time just what any piece of work has cost. If you can satisfy taxpayers that the money they are contributing to the support of the government is wisely expended, there will usually be no trouble in getting money to the limit of the taxpayers' ability to pay. Appropriations to do work should not be made in a lump sum, but for a specific job. Men who know their business can and should estimate before a job is begun what amount is needed, and for what it is needed. Beware of the man who asks for a certain amount of money to do work but can not tell for what until after the money has been expended.

Your engineer should furnish you annually a report showing the condition of such section of your existing roads, and an estimate in detail of the amount of money needed for expenditure on each such section; other conditions being equal, the money allotted should be proportional to the traffic the roads carry. In the average county at least 75 per cent of the total traffic is carried upon about 15 per cent of the total road mileage, and it should be to this mileage that the greatest attention should be paid.

Provision having been made for the care of existing roads, the engineer should then start on the preparation of a plan for a complete highway system for the territory in his charge. This should be such a system of roads as will assist in the greatest possible commercial and civic development, mination to be made should be begun

as soon as your engineer assumes charge of his work. The facility with which your community shall make progress towards such prosperity as you shall ultimately attain will depend in large measure upon the far-sightedness of him whom you select to make this study for your county road system, because he must not only provide for the traffic which comes upon the roads today, but for future traffic possibilities. This study will take considerable time and it should proceed with great deliberation. The plans, when completed should show the roads in the order of their importance, in which they should, of course be constructed, and the type of road that should be used in each case. New construction involves a considerable expenditure, and before undertaking it, you should have a sufficient study of conditions made to determine whether the traffic which will come upon the road under consideration necessitates an earth road, a gravel road, a plain macadam, or, a higher type. If the traffic which will come upon the road under consideration is sufficient to destroy a certain type of road a short time after it is completed, you would certainly be unwise to use this type. You should ascertain in advance what type of road will be required by the traffic and not go ahead blindly and build a road entirely unsuited to the conditions. The plan and list of roads in the order in which they should be built, after preparation by the engineer, should be submitted to the local officials for their approval, and later when it is desired to construct, the engineer should be requested to survey and prepare plans and estimates of cost of construction for the road heading the list. No matter what type of road is to be built, great care must be taken in its construction. It is folly to go to the expense of building a road if care is not taken to get the best results possible. All types of roads are at various times condemned when the fault does not lie with the type of road, but with the method used in its construction. To do all of these things, you must first have proper plans on which to work. The construction plans should in turn be submitted to the local officials for approval and appropriation of the money needed to construct. Strict adherence to the above program, I believe, will give general satisfaction, until your engineer has prepared his outline of a complete county system. You should do as little new construction as possible until it is completed, confining your attention in the mean-

(Continued on page 12)



## Farmers Say It's Dependable



What's more important than a lubricant that puts "pepp" and easy action into your farm machinery, and keeps all moving parts free from friction?

### Golden Harvester Machine Oil

is dependable, according to all farmers who have tested its efficiency. It should be used on mowers, rakes, binders, plows, threshers and all farm machinery. Its use is its best evidence. Buy it from any dealer.

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Sugar contains 98 per cent available energy as food, fruit contains 90 per cent—any substitute for these foods costs much more money. You need canned fruit for a properly balanced ration—

**IT SAVES MONEY**

Associate yourself with a growing bank.

Records of deposits of this institution.

1912	\$3,200,000
1913	3,800,000
1914	4,500,000
1915	5,300,000
July, 1916	6,500,000

**AN INCREASE OF  
\$3,300,00, MORE THAN  
DOUBLED IN FOUR  
YEARS.**

**Walker Brothers  
Bankers**

SALT LAKE CITY



## DAIRYING

### THE PROFITABLE DAIRY COW F. W. Merrill.

The profitable dairy cow is one that will utilize her feed in the manufacture of milk, producing enough, the sale of which will pay for her feed, for her care, and pay a good interest on the money invested in her. To be profitable she ought to produce from 7,500 to 9,000 pounds of milk during the year or 25 to 30 pounds per day for 300 days. The milk should test 3.5 to 4.0 per cent butter fat. If she produces 8,000 pounds of milk testing 3.8 per cent she will yield 304 pounds of butter fat which if sold at 30 cents is worth \$91.20. The skimmed milk is worth 25 cents per hundred if fed to the calves, or the hogs or to poultry. If she is a well bred dairy cow—not pure bred, her heifer calves if sired by pure bred dairy sires are worth \$40.00 each when six months old. Her male calves are worth veal prices. Many farmers in Cache valley are making good money by carrying the male calves to two year of age and selling them for beef.

The cows manure is a valuable product on any cultivated farm in Utah. To the bee grower or the orchardist it is invaluable.

Such a cow can utilize good alfalfa hay, even if it does sell in the milking camps for \$25.00 a ton, and make a good big profit. I do not hesitate to say that there has been no better market developed for Utah alfalfa crop, than a good dairy cow.

The unprofitable cow is in the majority in Utah, and the unfortunate part of the whole matter is, we do not know how unprofitable she is. These cows do not pay even a fair price for the hay they eat. Their calves do not show any improvement and men keep them because they want to, not because they are compelled to do it. If the cow owners would keep a small pair of scales and weigh the milk daily and keep a record of it, test the milk for butter fat, with a Babcock tester they would not be long in learning just where they stand in the dairy business.

When hay is scarce and its value goes up. When grain is in demand at high prices, when land is expensive and the rate of interest high, it is not good business to keep poor cows.

A cow census in Minnesota brought out some interesting facts for cow owners. A cow census in Utah might prove to be just as interesting. In the census were 100 herds containing 1092 cows. The gross returns from the creamery were \$32,815. The cost of feeds consumed by the cows was \$27,191.00 leaving a profit of \$5,624.00. If all the cows had been equal to the best one the gross returns would have been \$71,072.00 the cost of feed would have been \$29,576.00, and the net profits would have been \$41,496 instead of \$5,624.00.

One hundred and forty-eight cows like those in the best herd were equal in production to the 1092 of the average. It is much better to keep one good cow than to keep eight poor ones.

The man operating with poor cows can easily be put on the rack. When the crops of one year fail and he is compelled to buy feed. The farmers in Utah have good land and complete crop failure is unknown, but irrigation

is expensive and labor is high. They are a long distance from good markets, hence they must have good cows as a part of their equipment.

There are two ways of securing good cows. One way is to dispose of the poor cows and buy good ones from men who have been breeding animals for the special purpose of producing milk. The second way is to purchase a pure bred dairy bull and grade up the common herd following the principles of breeding and rigid selection. This second plan takes time, but it pays and pays well, but examples and experiences do not count for much. The farmer, raising livestock of any kind if he has any, pride in his work, if he works for profit, if he understands anything at all about livestock, he must realize that the pure bred male is the only one to use.

Utah is among the leading states in the quality of its horses and the use of pure bred stallions, commenced just a few year ago is responsible.

The organization of a breeders circuit is the best solution of the pure bred bull problem. Several dairymen should get together and decide upon one breed and then purchase the best sires obtainable. This plan has made Waukesha County Wisconsin the biggest dairy cattle center in the United States and it has been done in ten years time.

### TEMPERATURE IN THE SILO

C. H. Eckles.

Every one who has used a silo has observed that at times the silage becomes hot. This is generally noticed on the surface during mild weather as when the silage is being fed in rather small quantities. Many have supposed that the entire mass of silage becomes very hot and that a certain amount of heat is necessary to preserve it. Agents of various types of silos have also taken advantage of the lack of general information on this subject to make claims for or against certain types of silo on the ground that the temperature of the silage is influenced by the particular construction.

The Missouri Experiment Station decided two years ago to get the facts. Electric thermometers were placed in silos to take the temperatures. A bulb was placed in the silo during filling at any point where it was desirable to take the temperature. This bulb had wires leading to the outside of the silo so the temperature could be taken with an electrical device at any time. Temperature readings were taken near the center of the silage mass and at the wall at frequent intervals during two seasons in from 8 to 10 silos including stave, iron, tile, and concrete.

It was found that the temperature in the depth of the silage is never high as it is so often thought. After filling, the temperature rises from 5 to 10 degrees the first few days and then slowly declines during the fall and winter until it reaches the lowest point about 40 degrees in March. In good silage the temperature seldom goes more than a few degrees if any above 100 F. and may not go above 90. The only high temperatures found are at the surface when the air comes in contact with silage. Further—

## "DOG DAYS" the best time to buy a DE LAVAL SEPARATOR

THERE was never before as good a time to buy a De Laval Cream Separator as **right now.**

The "Dog Days" are at hand when dairying is most difficult without a separator and when the increase in quantity and improvement in quality of cream and butter are greatest through the use of a good separator.

Then there is the great saving of time and labor, which counts for more in summer than at any other season and often alone saves the cost of the separator, aside from all its other advantages.

This is likewise the season when De Laval superiority counts for most over other separators,—in closer skimming, larger capacity, easier running, easier

handling, easier cleaning and absolute sanitation.

A De Laval Cream Separator bought now will easily save its cost before the end of the year, and it may be bought for cash or on such liberal terms as to actually pay for itself.



**The De Laval Separator Co.**

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NEW YORK

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We loan on first mortgages on Utah farms or Salt Lake City real estate at reasonable rates.

Prompt action and fair treatment if you do business with us.

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Manufacturers of Folding Boxes.  
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more a temperature much above 100 means loss of silage as some of the material is being actually burned to make the heat. Mould will raise the temperature some. Corn put in the silo in a mature condition develops more heat than that put in green. No relation was found between the material used in the construction of the silo and the temperature of the silage. Practically no difference in the freezing of the silage on the wall was observed with the different kinds of silos.

#### KEEP COWS WELL FED

During the hot weather of July and August the milk flow of the average herd drops down nearly half. The heat and the condition of the pastures common at that time of the year are the main causes of this drop. The flies generally blamed are of much less importance than other conditions. The real cause is the failure of the animals to eat sufficient feed. Poor pastures, heat, and flies may all contribute to this result. It will be observed that during the hot weather the cows will graze but little and come to the barn at night evidently hungry. To produce three gallons of milk a day a cow has to gather at least 100 or 125 pounds of grass. If the pastures are short and the weather hot generally this much grass will not be gathered and soon the milk flow goes down.

The influence of these summer conditions cannot be removed but may be improved. The main thing is to see that the cows do not lack food. They should be in the pasture at night and during the earliest, coolest part of the day. If the pasture is short feed silage or green crops. It is well known to all experienced with dairy cattle that when the milk flow goes down once for lack of feed it is impossible

### Successful Farming

The size of business often has much to do toward making the farm profitable.

Here is a small farm of 50 acres, JUST WHAT YOU WANT, with a rich, black loamy soil. Well adapted to the raising of beets, alfalfa, fruit, garden truck, etc. Good market for the garden truck near by. A good permanent investment for a man that wants an ordinary sized place that he can make a good profit out of.

Prior water rights at \$1.00 per acre if used.

See or write—today

**W. C. ALBERTSON**

604 Dooly Bldg.  
Salt Lake City, Utah.

to bring it back to where it was before by better reeding later. To get a high production of milk during the year the cow must be kept at a high level of production all the time. For this season do not neglect the cows during the hot weather and expect them to come back strong again when conditions become better in the fall. Keep them going all the time.

#### KEEP MILK SWEET

Percy Werner, Jr.

The approaching warm weather will make it necessary for dairymen and housewives to take extra precautions to prevent loss through souring of milk and cream. As milk is an ideal food for both babies and bacteria, it frequently happens that in warm weather the bacteria are the first to enjoy this delicate food. Though the acid developed in the milk during souring is not harmful to the health of adults, it is injurious to infants, and distasteful to many older people, and will surely cause dairymen to lose money.

A successful dairyman has solved this problem by removing the causes. Since dirt is loaded with bacteria he first keeps both dirt and bacteria out of his milk, by using a small-top milk pail, by keeping his pails, cans, strainers, and other milk utensils clean, and by keeping his cows free from dirt and filth. This can be cheaply and efficiently done by thoroughly washing the utensils with hot water as soon after using as possible and setting them in a clean protected place to drain until used, by brushing the cows daily and preventing them from becoming dirty, by using plenty of bedding, and by keeping the barnyard clean.

Since bacteria will not sour milk unless they grow in it, he prevents their growth by cooling his milk as soon as produced and keeping it cool until delivered. The best of dairymen cannot furnish milk so free from bacteria that it will not sour if left for hours in a warm place. Both dairymen and housewives will do well to remember the cleanliness and low temperatures (50 degrees or less) will prevent this loss.

#### THEY CO-OPERATE; CREAM PRICES UP

A. J. McQuire.

Most co-operative creameries in Minnesota pay their patrons from 5 to 8 cents a pound more for butterfat than is paid by individual cream-buying establishments. There are 850 creameries in the state. Of these, 622 are co-operative, 189 individual, and 39 centralized.

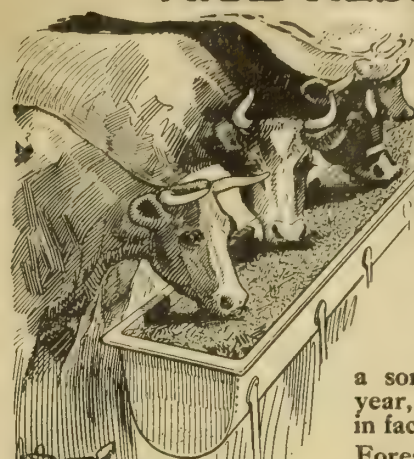
A canvass made of the representative creameries of Minnesota for last March showed that first class co-operative creameries paid from 40 to 42 cents a pound for butterfat, while a few co-operative creameries that are poorly supported paid as low as 30 cents a pound. In every case of the low price, there was a small amount of business, the creameries making only about 100 pounds of butter a day. The creameries that paid 42 cents made about seven times as much of business, the creameries making from 200 to 300 pounds of butter a day paid from 37 to 39 cents a pound for butterfat. Farmers who shipped cream got on an average about 35 cents a pound.

The co-operative creamery is the only means whereby the farmers can get the highest price for butterfat.

Many co-operative creameries that

# DAIRYMEN !!

## MAKE RESERVATIONS NOW



## For This Season's Supply of DRIED BEET PULP

The beet sugar factories will soon begin the slicing of this season's beet crop—and that means a new supply of Larowe's Dried Beet Pulp. While we will have a somewhat larger supply than last year, yet the demand is also larger—in fact, has increased enormously.

Foresighted dealers in nearly every district have already placed orders for shipment—but if you wish to make sure of getting what you require it will be well to see your dealer at once and give him an order for early delivery or state the amount you think you will need during the next few months.

Everything seems to favor the man who is prepared, so we say—"see your dealer now."



—is a succulent, milk-producing, vegetable feed that gives certain and profitable results. Combine it with alfalfa and it makes a wonder ration. It increases the milk flow from 1 to 5 lbs. per day from each cow, and in addition keeps your cattle healthy, sleek-coated and bright-eyed.

Larowe's Dried Beet Pulp is light, bulky, succulent and easily digested; absorbs water very quickly and swells to about six times its original bulk; is cheaper than bran and other mill feeds, yet produces better results. It is put up in convenient 100-lb. sacks, and may be had either plain or with molasses. Ask for "Larowe's."

Feeding Booklet Free—Write for it!  
"Profitable Feeding" contains valuable information that should be in the hands of every feeder. Sent free on request.

## THE LAROWE MILLING CO.

947 Central Building  
LOS ANGELES, CALIFORNIA

are struggling along with only half a business could do well if they got all the cream produced in the community. It must be remembered that a co-operative creamery to pay the top price must have at least a certain amount of business. The creameries that paid 42 cents a pound for butterfat during March were buying large amounts every day. One hundred farmers in any community with seven to ten cows each can have such a creamery in their community if they will work together.

#### THE DAIRY COW IS A WEALTH PRODUCER

The cow will make a factory of every farm if given a chance. On every hand cornstalks and other by-products of grain farming are going to waste. A fertilizing value of \$375 is represented by the feed which a cow will convert into a ton of butter that removes but a few cents worth of fertility from the farm.

The cow is a hard worker, but she charges nothing for the privilege of transforming the corn, alfalfa and other farm feeds into one of the best

foods known to man. What greater work could be expected of a domestic animal?

The product of the cow is a crop that never fails if we do our part. The dairy pay check comes each week and helps to put farming on a cash basis.

Not every farm is adapted to dairy farming as a specialty, but there is scarcely a farm where a small herd of cows would not be highly profitable as a side line.—Kansas Farmer.

### BUTTER WRAPPERS

We carry a large stock of the Best Vegetable Parchment Butter Wrappers and Especially Prepared Ink for Printing the same. We furnish them Postage Prepaid at the following Prices, money to accompany order.

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200	.....	\$ 1.25
500	.....	\$ 2.25
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## POULTRY

### EGG MARKETING IN THE SUMMER

The quality of eggs that are sent to the market at this time of the year is often very poor, causing a decided loss to the producer and others who are forced to handle these eggs. The greater part of this inferior quality is due to the development of the chick in the egg. If the egg contains a fertilized germ, heat is the only factor necessary to cause this germ to grow. Then if it is chilled the germ dies and the decomposition of this dead embryo starts decay of the entire egg. Even before this decomposition takes place the egg is practically unfit for food, because of the change due to the chick growth.

The temperature at which this growth takes place is not very high; development begins at 68 degrees F. and increases in rapidity as the temperature rises. Fertile eggs held for thirty-six hours at a temperature of 100 degrees are then of very poor quality—if not entirely spoiled—for human consumption, while infertile eggs may be kept for several days at the same temperature and still retain to a great extent their quality as marketable eggs.

One way of increasing the profits of poultry raising and having a better quality of eggs in Utah is to "swat the rooster" as soon as the hatching season is over and produce infertile eggs during the rest of the year. If there is no embryo in the egg there is no point where decomposition can begin except from an outside source. It has been demonstrated by one of the leading experiment stations of the country that eggs can be produced at 30 per cent less cost where no male bird is present in the flock. Sell, kill or confine away from the hen all roosters and produce infertile eggs. Gather eggs twice daily and store in a cool place. This will increase the supply of good eggs on the market, cause a greater demand for eggs, prevent most of the loss from bad eggs, and thus bring a better price or greater returns to the producer.

### HINTS FOR POULTRY-RAISERS

H. L. Kempster.

Sour milk is valuable in any ration. Summer shade insures thrifty chicks.

Remove over-active cockerels to a separate yard.

Clean up the incubator, remove the lamp, and throw away the wick.

Soft fresh dirt is an insurance against leg weakness in chicks.

Add to the grain feeds with a mix-

ture such as bran, shorts, and corn meal.

Do not keep unnecessary male birds. An extra hen eats no more and may lay eggs.

When range is limited spade up the runs or move the brood coop a short distance daily.

Spoiled or decaying flesh, if eaten, will surely cause limber neck. Burn or bury the dead.

Watch for head lice on the chicks, if found, rub top of head with a small piece of lard free from salt.

Avoid crowding by keeping in small flocks and by providing roomy coops. Thin out if there are too many.

Broody hens should be removed to slat bottomed coops as soon as discovered. Leave them there until they forget it.

Clean fresh water lessens disease. Filthy drinking water is the source of much trouble. Clean the drinking pans frequently.

If hens are lousy, rub a piece of blue ointment the size of a pea into the skin beneath the vent and on the underside of the wings.

Mites are sure to accumulate if the droppings are not removed every week, and the roosts sprayed with kerosene emulsion or disinfectants.

After the grass gets tough chicks can catch more bugs and worms and will grow better on loose soil. The corn field furnishes ideal conditions.

### PRUNING OF CURRANTS AND GOOSEBERRIES

Old canes must give place to new if satisfactory yields are to be had.

The main reason that currant and gooseberry bushes do not yield satisfactory crops from year to year is due to the lack of proper pruning.

Both currants and gooseberries produce their fruit on canes that are at least two years old, the first season being generally utilized for the growing of the canes, the second for the formation of fruit buds or spurs, and the third, a full crop may be expected. These canes will bear for two and even three years, but each year after the third, they begin to show a decided decline—the fruit becomes smaller and less valuable. In order to keep the production up to the standard, the bush should be placed on the rotation basis, that is, each year a few new, strong shoots should be permitted to grow. All the rest should be cut out, and also each spring a like number of the oldest canes should be removed. In other words, we should grow the same number of new canes that we take out in old canes. In this way, we eliminate the old and exhausted canes and keep the bushes in strong, vigorous growth. Further as the season progresses, all shoots beyond those that we wish to use for fruiting later on, should be removed and not permitted to utilize the food supply that should go to the fruiting canes.

Currants and gooseberries are not profitable, unless they are given thorough cultivation and fertilizers. The fertilizers should always be applied in the fall and worked into the soil with the first cultivation in the spring.

Gooseberries require the same treatment as currants, as they have the same fruit habits.—E. P. Sandsten, Colorado A. C.

A woman's scream is as effective protection to her as a man's ability to fight is protection to him.

## TRUE ECONOMY

### CHEAPNESS

is not based on what you pay but on what you get for what you pay. That's why you should buy

## SCOWCROFT'S

NEVER-RIP Overalls and "MADERITE" Shirts

TRY THEM. They will give you more comfort and service for your money than any others you can buy.

### UNION MADE

and they always give Satisfaction

John Scowcroft & Sons  
Co.  
Ogden, Utah.

The Utah Work Clothes  
Manufacturers.

## Sunday

and

## Week-End Excursions

Via

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At Slight Cost.

Half Fare  
Sundays—  
Slightly More  
Saturdays to  
Mondays.

### EACH WEEK

### BETWEEN LOCAL POINTS.

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### Saturdays to Mondays—

—To encourage baseball games and other sports between different towns.

—To make possible inexpensive outing and fishing trips, and generally to make it possible for our patrons to "get about."

Ask any Oregon Short Line agent for further details, or write,

D. S. Spencer, General Passenger Agent,  
Salt Lake City, Utah.

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SEPARATORS,  
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Established - - - - - 1904

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#### OFFICES

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Lehi, Utah, Kirkham Building.  
Our office at Salt Lake City, Utah,  
is at 417 McIntyre Building.



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S. E. LEITH, Mgr.  
Chicago Office Steger Bldg.  
TOM D. COSTELLO, Mgr.  
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St. Louis Globe-Dem. Bldg.  
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former as well as their present address, otherwise the  
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portance to you and to us.

#### OFFICIAL ORGAN

Utah Horticultural Society, Utah State Dairymen's  
Association, Utah State Bee Keepers' Association  
Bear River Valley Farmers' Protective and Commercial  
Association, Agricultural College Extension Depart-  
ment and Utah State Fair Association, Utah-Idaho  
Millers' and Grain Dealers' Association, Utah Fruit  
Growers Association.

#### OUR GUARANTEE

We guarantee every subscriber against loss thru dis-  
honesty or attempted swindle by any advertiser in  
this publication. We do not attempt, however, to  
adjust trifling differences between the subscribers and  
honest responsible advertisers, nor will we pay the  
debts of honest bankrupts. Notice of complaint  
must be sent us within thirty days from date of the  
transaction, and the subscriber must have mentioned  
Utah Farmer when writing the advertiser.

**Advertising Rates**—The advertising rates will be sent  
upon application.

After acquiring all the knowledge he can from  
books, many a man takes a postgraduate course  
by marrying a widow.

Bran poisoning of grasshoppers is proving very  
successful in some sections. July twelfth the  
bran mixture was scattered. July nineteenth a  
careful checking on results was made. A yard  
square in different places was laid off and count-  
ed. An average of 116 dead grasshoppers were  
found on a square yard of ground. Such was the  
results in one place. If any of our readers are  
interested we may be able to help them.

On a recent trip through a newly settled dis-  
trict we saw but a very few trees. How barren  
it looked as compared to older districts were a  
number of trees were growing. Start some trees  
at once of the quick growing varieties and they  
can be replaced latter by other kinds if you de-  
sire. But get some trees started to provide  
shade for the livestock and around the home. It  
takes time for them to grow and they should  
start just as soon as you take hold of a new farm.

#### RURAL CREDITS

Congress has passed a rural credit law and the  
President has signed it. In the next issue of  
the Utah Farmer we will give a review of the law  
as it was passed and tell what is necessary to do  
in order that one may get a loan.

The law may not be just what will suit every

one but it is a big step forward and can be cor-  
rected as experience and usage will suggest.

As may be expected, it will take a little time  
to get the machinery of the law working. Much  
will depend on the different communities and the  
initiative they put into it.

The farmer has not had a square deal, when  
compared with the merchant, in borrowing money.  
It is hoped that this new law will materially help  
to adjust conditions in behalf of the farmers.

#### KEEP AFTER THE WEEDS

The fight against weeds must be more or less  
of a community affair. It is hard for an individ-  
ual farmer, no matter how careful he may be to  
keep the weeds on his farm under control.

If all farmers will become interested and work  
together the trouble will be much less and better  
results will follow. On many farms the weeds  
are killed among the growing crops but the ditch  
banks, corners and fence rows are allowed to  
produce enough seed to grow as many weeds  
another year. These places should be cleaned of  
all weeds at least twice a year. Cut them down  
and see that they are burned.

If it is practical put a few sheep on the ditch  
banks they will clean them up. One man sug-  
gest a few hungry cows will help. However you  
do it keep after the weeds.

#### WILL HELP MAKE HAY

The weather bureau now plan to help the farm-  
er, "make hay while the sun shines," in other  
words a weather forecast of three days will be  
given. Mr. Thiessen says by making these fore-  
casts the farmer will be guided when to cut his  
alfalfa. If we knew there would be three days  
of sun shine ahead of us it should help in prop-  
erly curing our hay. The government is trying to  
help the farmer and this is another way we can  
profit by calling on or accepting of Uncle Sam's  
service.

Later on in the season, frost warnings will be  
sent out in all alfalfa seed districts warning them  
of a coming frost. This will be done so the farmer  
can protect the quality of his seed.

If such a service can be made practical for  
alfalfa districts during the "haying" and "seed-  
ing" seasons it will materially help to increase  
the quality of our alfalfa products.

#### PROFITS IN USING PURE BRED SIRES

If the Utah Farmer could only make the live-  
stock men of this state, learn the value that  
would come to them from using pure bred sires,  
we would do a great service to our state. Over  
in Oregon they estimate that eleven pure bred  
dairy bulls just purchased and placed in two  
counties will be worth \$100,000.00 to them. Here  
is how the expert in dairying has figured it out.

"By conservative estimates, an increased pro-  
duction of 15 per cent or 33 pounds of butterfat  
from the daughters of these cows, should be se-  
cured. There will be approximately 225 heifers  
sired by these imported animals, added to the  
herd this year. During the eight years, which is  
the average working life of a dairy cow, these  
cows should produce 36 pounds of butterfat more  
each year than their dam produced, or a total  
of 408,000 pounds, which at an average price  
of 25 cents per pound would be worth \$102,060."

Even though this estimate is cut down, see  
what a profit there is in using a pure bred sire.

#### EXPENSIVE TO GROW SMUT

If any one doubts the value of treating seed  
oats for smut they ought to see some of the tests  
that are being made by the Utah County Demon-  
strator C. W. Lindsay.

We had the opportunity this week of visiting  
and checking up the results of seed treated with  
formaldehyde and those that were given no  
treatment before planting.

In one field a careful estimate was made that  
smut occurred only once in every thousand. In  
another field not even so often.

The field of oats just across a small ditch that  
was not treated in any way before planting was  
fully one-half smut.

It cost just four cents an acre, besides the  
time or labor, to treat the seed oats before plant-  
ing.

A careful estimate was made that the better  
oat field would yield in dollar and cents about  
forty dollars at present prices and it is easy to  
figure that in the other field he was paying twenty  
dollars an acre to raise smut.

How long will we be satisfied with a half crop?  
It costs just as much to prepare seed bed, to  
irrigate and care for a poor crop as a good one.

It is expensive to grow smut! Why not profit  
by the experience of others and grow more pro-  
fitable crops.

#### AN OPPORTUNITY FOR BANKERS

Many of our bankers do not realize the oppor-  
tunity they have to help improve rural conditions  
and increase their business. Bankers in other  
states are awake to these things and are setting  
a pace many of our people could follow.

There are many ways to help, we will refer  
to only one, the pig club work.

The bankers made it possible for worthy club  
members to secure well bred pigs on their per-  
sonal notes. The member to pay for it from the  
proceeds of the pig as a meat animal or from the  
sale of offspring in the case of a breeding animal.  
The member enters into a business agreement  
(with the parents' consent) with the banker.  
This arrangement is a practical means of teach-  
ing business methods to the rural young people.  
It is also a character building process, for it is  
but natural for a boy when treated as a man, to  
act in a manly manner.

This is not generosity on the part of the bank-  
ers it is business acumen. A case in point  
where the president of a bank placed 326 pigs  
among the pig club members of his county. As  
a result of the acquaintance made in securing  
and placing these pigs, many new patrons were  
secured. These patrons brought in over \$75,000  
in individual deposits. Needless to say, this was  
profitable business for the bank, but it is also a  
means that will increase with time in its  
beneficial influence. The boys that he has help-  
ed to get started in the hog business are now on  
their feet financially and before many years they  
will be making big shipments of hogs to market  
each year. The money received from the sale  
of hogs will be expended in further developing  
the county. Every merchant in the county will  
profit, the bank will get more deposits, and the  
farmers will have more money with which to fur-  
ther develop their farms.

To any banker that is interested in doing such  
work we will gladly give all details and how he  
can get aid in carrying on the work.



LIVE STOCK

PREPAREDNESS AT FARROW-  
ING TIME IS MONEY SAVED

Farmers who intelligently feed and care for their pregnant sows, so as not to overload them with fat, but instead give them feeds for the development of bone and muscle, are on the right road toward the production of strong, healthy litters. Their preparedness program, however, does not end here.

Two weeks before farrowing the sow should be put into a farrowing pen so that she will become acquainted and contented in her new quarters. The farrowing pen should be dry and free from draughts. Provide the pen with a guard rail made of 2 by 4-inch planks set 8 inches from the wall and 8 inches from the floor to prevent the sow from crushing the pigs against the wall. Use only a small quantity of bedding; leaves or straw are preferable. See that the sow has plenty of fresh water.

It pays to keep the sow quiet. Assistance at the time of farrowing should be at hand if needed, but the sow need not be helped if she is getting along well. In cold weather put the newly born pigs in a well warmed basket and after farrowing is over the pigs should be placed with the sow, care being taken that each one gets to a teat. When the afterbirth is passed, it should be removed from the pen at once and burned or buried.

After farrowing the sow should

have nothing but water and a little thin slop for the first day. The feeding for the first three or four days should be light, and the time consumed in getting the sow on full feed should be from a week to ten days, depending on the condition of the sow and the size and thrift of the litter. It takes plenty of sow's milk to make healthy growing pigs. If the pigs begin to scour, feed the sow less and give her plenty of strong lime water.

It is very necessary that the little pigs have plenty of exercise and all the sunlight that can be given them. Do not allow the pigs to run out during a cold rain. If possible, provide green feed or roots. These keep the sow healthy and cheapen the ration. Encourage the pigs to eat grain after they are three or four weeks old. Build a creep for them so they can feed alone. At this age feed for bone and muscle. Give them all the skim milk you can. If the skim milk is not available, give them some meal and plenty of pasture. In about eight or ten weeks the pigs will have practically weaned themselves. After they have been successfully weaned the most perplexing job is over.

By putting into practice the essential points above mentioned the number of pigs raised to weaning should be increased. Hogs never fail to respond to good care. Kind treatment always means contentment with its corresponding profits.

FARM RECORDS FOR  
"SAFTY FIRST"  
R. M. Green.

One of the farmers co-operating with the Agricultural College in keeping farm accounts had a bit of interesting experience this winter that points out, at least, one advantage of good business records.

He was trying to keep a very accurate record. Before sending his book to the College to be summarized he attempted to see if the cash which he had on hand at the beginning of the year plus his cash receipts during the year, minus cash expenses during the year equalled his cash balance at the end of the year. He found he was about eight dollars short. He had his bank look the matter up again, but they reported that the balance first given was correct. A few days later in turning through his record book the farmer came upon an amount just equal to his shortage. He took his record book to the bank the next time he went to town and succeeded in finding that an eight dollar cream check of his had been credited to another man having the same initials and a somewhat similar surname.

When a man talks, he is usually representing his prejudices or his individual troubles; very few people condemn a thing because it is wrong, or praise it because it is right.

A man has a right to be a fool about two or three things; but if he is a fool about everything, the people are a right to criticise him.

You can get a very good thousand dollar piano for three hundred dollars.



Why Not  
Give Your Cows  
This Advantage?

The comfort of your cows contributes as much to their welfare as pure water and good feed. It's a wonderfully important factor in making your herd profitable. It means healthy, contented animals and increased milk production.

Louden Tubular Steel Stalls and Stanchions keep your cows clean and healthy, protect them from injury, and give them PASTURE COMFORT.

Each cow is held securely in her place but is not hampered in her movements. She can rise and lie down naturally. The flexibly-hung stanchion allows her to lie comfortably at the side of her stall.

Tubular steel costs but little more, if any, than wood construction. It is more convenient and sanitary and is practically indestructible.

Our prices will appeal to you. May we quote?

MILLER-CAHOON CO.

Murray, Utah

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CATTLE RANCH

500 acre ranch located in best cattle country, joins best free range, put up 300 tons hay, will support 500 head of cattle now. All machinery new. Price complete, only \$15,000.

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Eccles Building Ogden, Utah

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LOSSES SURELY PREVENTED  
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Low-priced, fresh, reliable; preferred by western stockmen, because they protect where other vaccines fail.  
Write for booklet and testimonials.  
10-dose pkg. Blackleg Pills, \$1.00  
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Use any injector, but Cutter's simplest and strongest. The superiority of Cutter products is due to over 15 years of specializing in VACCINES AND SERUMS ONLY. INSIST ON CUTTER'S. If unobtainable, order direct.  
The Cutter Laboratory, Berkeley, California

Garmesa Farms

All records show the  
HOLSTEIN to be  
The best Cow  
Buy a bull calf from an  
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EAR PERFECT  
TAGS

Attached Instantaneously  
Name and Address. Numbered if Desired.  
LEG BANDS for Poultry, Pigeons, Turkeys.  
SALT LAKE STAMP CO. Salt Lake, Utah.



FOR PRESERVING

The Bee

uses only the finest and purest of wax for the preservation of her winter store of honey.

With equal prudence the sensible housewife uses Parowax when she "puts up" fruit. She knows it prevents mold and fermentation, makes the jars and jelly glasses air tight and preserves the original flavor of the fruit.

Parowax, the purest form of paraffine is guaranteed under the Pure Food and Drugs Act. It is sold by reliable dealers in one pound cartons.

The bee wouldn't be so busy if she knew about Parowax.

THE CONTINENTAL OIL COMPANY

(A Colorado Corporation)

Denver Pueblo Salt Lake City  
Cheyenne Butte Albuquerque Boise



When you answer the advertisements in this paper tell them you saw it in the Utah Farmer. Always buy advertised goods.





## For Greatest Satisfaction Use DOUBLE SERVICE Automobile Tires Guaranteed 7,000 Miles Service Absolutely Punctureproof

Double Service Tires are made double the thickness of the best standard make tires.

This 100% greater wearing surface naturally gives that much more mileage and service. The average of 12 miles of tough fabric and one inch surface tread rubber makes these tires absolutely punctureproof.

These tires excel all others for use in the country over rough and rugged roads as well as on hard pavements. They are as easy riding and resilient as any other pneumatic tire—the air space and pressure being the same.

They are the most economical and "care free" tires made and are used where tires must be depended on and tire troubles cannot be tolerated. Many Double Service style tires are in use in the U. S. government and European War service.

Our output is limited to a certain amount, but for a short time we offer the following reduced special prices as an introductory offer:

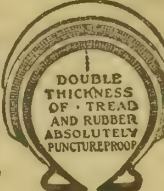
### PRICES

Tires Tubes		Tires Tubes	
30x3 in.	\$ 8.60	36x4 in.	\$17.45
32x3 1/2 in.	10.85	35x4 1/2 in.	21.20
32x4 in.	12.75	36x4 1/2 in.	22.60
33x4 in.	15.75	37x4 1/2 in.	23.60
34x4 in.	16.70	37x5 in.	26.30

All other sizes not included in above list also furnished. Non-skids at 10% additional. Terms: Payment with order at above special prices. A 10% discount allowed on orders for two or more tires. All personal checks must be certified.

Try these tires now and be convinced of their very high qualities. Sold direct to the consumer only. Descriptive folder upon request. Write for it.

Double Service Tire & Rubber Co., Akron, O. Dept.



## STARS MAKE DOLLARS

If you're a man of energy and business ability, here's an opening worth consideration. There is a great demand for drilled water wells, and there's large sure profits to the man with a

### STAR DRILLING MACHINE

Portable—Steam or Gasoline

Best by test. Low in price, high in practical worth. You can make it pay for itself and earn dividends all the time. Look into this! Sold on payment plan if desired.

Our 140-page catalogue describes 21 different Star Outfits. Write us and we'll mail you this book, which will point the way to money making. Write to-day.

Star Drilling Machine Co.  
842 Washington St.  
Akron, O.



## For silo owners

### Start now to choose your silo filler

Losses were very heavy last fall among farmers who depended upon somebody else's cutter, and couldn't get it when needed the worst. Others lost big because their cutters broke down at the critical time. The

## BLIZZARD Ensilage Cutter

Is the dependable machine for the farmer—because of its simplicity, ease of running, fine lengthening and chopping, unlimited cutting and elevating capacity. Fills the world's largest silos as easily as twenty-footers. Self-feed table saves one man. Repair cost very little. Many satisfying good service after ten and fifteen years of use. Talk with us about an ensilage cutter now. Drop in for a catalog, at least.

Intermountain Concrete Co., Ogden, Utah.



Mention Utah Farmer when you write.

## HOME

### HEALTH NOTES

Suggestions and Food Values on Different Vegetables and Fruits Used in our Club Project Work.

The lack of the proper and daily use of vegetables and fruits is the chief cause of constipation.

Common Causes of Constipation:

1. Lack of bulk in food.
2. Lack of enough fruits and vegetables to balance ration.
3. Over-use of condensed foods.
4. Lack of water.
5. Use of laxative drugs. (A direct result of neglect in first four).
6. Lack of sufficient exercise.
7. Use of improperly prepared foods.

8. Lack of digestive fluids in connection with the foods.

9. Foods not easily chewed or digested (binding food).

Preventative Treatment for Constipation:

Treatment through the food supply always supersedes the use of medicine or the call of a doctor. Preventatives are:

1. Base the daily diet upon fruits and vegetables.
2. Thorough mastication of food.
3. Use of plenty of clean, pure water as a beverage.
4. Sufficient and proper use of clothing.
5. Sufficient daily exercise for every part of the body.
6. Cold morning baths.
7. Massage of the muscles.
8. Avoid the excessive use of meats, eggs, milk, coffee, etc.

Laxative Foods to be Recommended for Daily Ration:

Greens (both domestic and wild), Tomatoes, Garrotes, Asparagus, Cauliflower, Rhubarb, Apples, Prunes, Raisins, Figs, Citric fruits of all kinds, Date, Berries, Grapes, Molasses, Honey, Olive Oil, Butter, Coarse breads, Oatmeal, Cream and Butter-milk.

Foods to be Avoided if Suffering from Constipation:

Cheese, Spices, Pickles, Nuts, Scalded milk, Crackers, Eggs, Candy, Pastries, Starchy puddings, Fried foods, Rich gravies, Tea, Bananas and Large portions of meat.

Edible Cultivated Greens.

Swiss chard, Endive, Spinach, Mustard (native), Russian mustard, Turnip tops, Beet tops, Collards, New Zealand spinach, Rape, Cabbage sprouts, Dasheen, Upland cress, Dandelions and Chinese cabbage leaves.

Edible Wild Greens.

Upland cress (pepper grass) Pokeweed, Lambsquarter, Dandelion, Sour dock, March marigold, Smartwood sprouts, and Mustard (wild).

### SOLVING A RURAL PROBLEM

The Nation

For so deep a social disturbance as the steady forsaking of country life by those who can escape it, remedies that go deep are obviously necessary. And they will have to be felt by the masses rather than presented by the rural "uplifters." Causes both economic and social must get powerfully in operation before we shall see the beginnings of the desired effect. The argument from material well-being seems already to be slowly making headway. Historically, the flight from

## "Just What You Want—

—tempting, tasty, tender Biscuits, Doughnuts, Cakes and other wholesome things to eat—so good that I could eat 'em all.

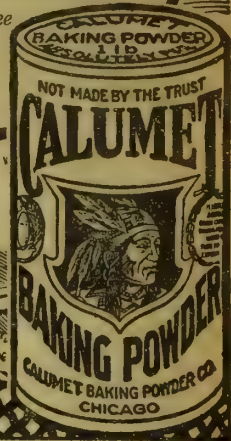
"That's because they're made with Calumet Baking Powder. I know Calumet is pure—I know it makes everything uniformly good—I know it never fails—I know it's the most economical to buy and to use.

"Mother uses Calumet every bakeday and you ought to taste the good things we have at our house."

Received Highest Awards

New Cook Book Free

See Slip in  
Pound Can



## Jiminy Crickets!



## NEW PERFECTION OIL COOK STOVES

"No more chores for me! No more coal and ashes to tote and wood to chop."

His mother uses a New Perfection Oil Cook Stove.

It cooks as well as gas at much less than the price of coal and keeps you cool and comfortable. No smoke or odor—no sweltering.

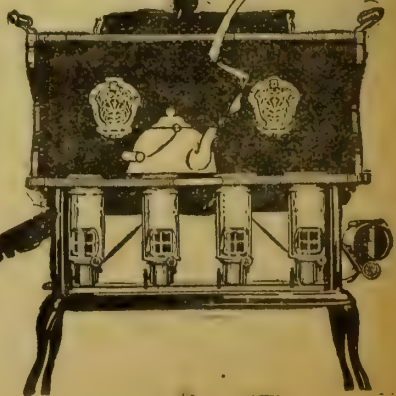
Conoco Safety Oil is best.

New Perfection Oil Cook Stoves are sold in many models at hardware and general stores everywhere. Look for the long blue chimney. See the new heat retaining oven.

### The Continental Oil Co.

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the country to the city was at first a part of the industrial revolution of the last century. The great factories, the more numerous jobs, were in urban communities, and farm workers, with those whose house-industries had been destroyed by machinery and specialization, went to the towns to find work. It may be that a reaction will set in, also for economic reasons. The struggle for existence may drive people back to the land. With farming made easier and more scientific and profitable, the terrible pressure in cities may soon begin to extrude to country districts many who must seek a new environment and opportunity if they are to maintain themselves above want or beggary. Until some such solid advantages, or social necessities, can be made the rural set-off to the artificial charm of the city, it will be in vain to hope for a repopulation of deserted hillsides. To reinforce the economic argument by every appeal on the score of health and sentiment is, of course, an obvious duty. Nothing that can be done to improve country schools, or to promote human intercourse among scattered farmers, should be omitted. And it might well be hoped that a change of mental attitude could be brought about so that men and women would again associate their happiest experiences with country sights and sounds, and have such remembered thrills of pleasure as stirred De Quincey when he recalled his joy, as a child, at the blossoming of the crocuses in his father's garden.

#### WISDOM

The Book of Ecclesiasticus.

Wisdom exalteth her children, and layeth hold of them that seek her. If a man commit himself unto her, he shall inherit her; and his generation shall hold him in possession.

For at the first she will walk with him by crooked ways, and bring fear and dread upon him, and torment him with her discipline, until she may trust his soul and try him with her laws. Then will she return the straight way unto him and comfort him and show him her secrets.

Come unto her as one that ploweth and soweth, and wait for her good

fruits; for thou shalt not toll much in labouring about her, but thou shalt eat of her fruits right soon.

She is very unpleasant to the unlearned: he that is without understanding will not remain with her. She will lie upon him as a mighty stone of trial and he will cast her from him ere it be long. For wisdom is according to her name, and she is not manifest to many.

Give ear, my son, receive my advice and put thy feet into her fetters and thy neck into her chain. Bow down thy shoulder and bear her, and be not grieved with her bonds.

For at the last thou shalt find her rest, and that shall be turned to thy joy.

Then shall her fetters be a strong defense for thee, and her chains a robe of glory, for there is a golden ornament upon her, and her bands are purple lace.

Thou shalt put her on as a robe of honor, and shalt put her about thee as a crown of joy.

#### BUTTER SCOTCH PIE

Take  $1\frac{1}{2}$  cups white sugar,  $\frac{1}{2}$  cup brown sugar, 2 heaping tablespoonfuls flour,  $\frac{1}{2}$  cup butter, 2 cups milk, yolks of 2 eggs, flavoring to suit taste. Mix all together and cook. Have ready baked crusts. Beat the whites of 2 eggs to a stiff froth and add to this  $\frac{1}{2}$  cup sugar. This recipe will make 2 pies.

#### SALMON SALAD

One can salmon, two eggs boiled and mashed, cut fine, two small cucumber pickles, add salt and pepper, mix all together, then take tablespoonful butter and melt and add a little vinegar and pour over the ingredients; mix well. You may add a few slices of a boiled egg on the top if you wish.

#### COOKING BEETS

Cook beets until very tender. To each quart of sliced beets, take one quart of vinegar, not too strong, and one-half cup sugar, one teaspoon whole cloves, a few sticks of cinnamon, put vinegar in a porcelain kettle, add sugar cloves and cinnamon, boil altogether about 15 minutes; drop beets in and boil about 5 to 10 minutes longer and seal in glass jars.

#### CAKE RECIPE

Three eggs, 2 cups granulated sugar, 2 cups sweet milk,  $\frac{1}{2}$  cup butter, 3 teaspoons baking powder, 3 teacups flour, any kind of flavoring to taste. Sift the baking powders and flour together three times, beat 7 minutes, bake in any kind of a pan.

Do not let linen become too soiled, because hard rubbing is likely to break the fibers. Remove all stains before linen is to be washed. The stains come out much better if removed as soon as they occur. Do not use a wringer but wring linen by hand. Rinse the soap out thoroughly before linen is placed into bluing water, for sometimes rust spots are caused by a chemical reaction between the bluing and the soap, and these are hard to get out later. Do not starch good linen, as it does not need it and the linen will last longer without it. Have linen hung in the sun to whiten. Use a hot iron, but do not scorch it. Iron with the grain of the material. If linen is to be stored for some time, wrap it in blue tissue paper or in a "blued" cloth.



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# BUILDING OF PUBLIC ROADS

(Continued from page 3)

time to your existing roads.

The care of your existing earth roads should consist in betterment and maintenance. Under betterment, proper drainage should be provided, excessive grades reduced, and the roadbed properly shaped. The cost of betterment will depend upon the condition of the road to be improved. It should not average over \$500 per mile, except in extraordinarily rough and hilly country. Under maintenance, the traveled way should be kept in as true and even a condition as possible, by a constant use of the road drag. Drains and ditches should be kept open, and the road kept safely passable at all times. The cost of maintaining an earth road will vary with conditions and may be as low as \$50.00 per mile a year, or as high as \$100.00. The yearly cost of patrol maintenance for 322 miles of earth road in one county in Iowa was \$11,400, or \$52.00 per mile. Of this amount, \$2500 was expended for dragging and \$8900 for repairs. All labor was hired at 45 cents an hour for teams and 25 cents and hour for men.

Drainage is unquestionably the most important betterment work. Without proper drainage, no type of road may be depended upon to give good service, and in the case of the earth road lack of adequate drainage is a calamity. Drainage must be provided both to remove ground water which reaches the foundation of the road by flowing through the ground adjacent to it, and to remove surface water.

Ground water is usually taken care of by underground drains. The precise method will depend upon local conditions. Sometimes a deep open ditch is used, but usually the drain is wholly underground where frost will not interfere with the year-around operations. The so-called blind-drain may be used to good advantage where the materials for its construction are available; in other cases, drain tile is used. If the road to be drained lies along sloping ground, the drain should be constructed under the upper shoulder of the roadbed. It is not often that drains are required under both shoulders. To construct the drain, a ditch is dug to a depth of about three and one-half feet, and given a width of about twelve inches on the bottom. This ditch is then filled with loose stone or coarse gravel to a depth of about two feet, the stone or gravel being so graded that water will flow through it readily and the voids at the top sufficiently filled with finer stone or gravel to prevent earth from getting in and interfering with the flow of water. The remainder of the ditch is then filled with the excavated material which is well tamped in six-inch layers. This type of underground drain gives good results. It acts throughout the year, and in the spring when the frost comes out of the ground, roads so drained do not run up to the extent that do those which are not drained. There must be cross-drains to carry the water from the longitudinal drains to the water courses. The ditches for the cross-drains should go a little lower to intercept the water flowing in the longitudinal drains. Drain tile may be used where stone or gravel is not available, or a combination of these may be used where the flow of water is considerable. Bell-jointed vitrified pipe is sometimes used, the bell end

being laid up-hill. Thorough underground drainage should be resorted to in soft ground where it is sometimes customary to use corduroy, and after the road is well drained in this manner, the use of corduroy will usually be found unnecessary.

Surface water is disposed of through shallow side ditches which should be staked out to a true grade to avoid standing water. The road surface must be kept to a uniform crown by constant use of the road drag when the road is in condition for dragging, so that ruts or depressions will not form. With a smooth, hard, and properly crowned roadbed, water coming upon it will run off quickly into the ditches, and then to culverts. Water should not be allowed to run in the ditches for a distance greater than from 300 to 500 feet. It should be carried away, across the road by culverts, and by ditches across the fields to the nearest water courses. If water is carried for long distances in the side ditches, considerable will soak into the ground and soften the sub-grade. Furthermore, large quantities of water running through the side ditches will scour them out. In the construction of culverts, I would advise an opening of not less than 24 inches and for material use concrete when your road is finally located.

Alignment and grade betterment, especially in hilly or mountainous country, is expensive and it is often difficult to convince the taxpayer of its necessity. The theoretically correct location for a road between two points, if economy of transportation only is considered would be one absolutely straight and level. All deviations from this theoretical location result in an increased cost of transportation. If it were possible to construct a level road, it would usually be unwise to do so, because of the difficulty in securing proper drainage.

Until a county road system is definitely decided upon, it is unwise to spend large amounts of money for grade reduction or alignment betterment. The question of maximum grade will eventually be determined by the importance of the road. The fixing of a maximum of 4 per centum for roads which will carry a very heavy traffic is about right, but it would be better to raise this limit on existing roads until the establishment of the permanent county road system.

The topography of the country in most cases precludes the construction of a straight road. It must usually be a series of straight stretches connected by curved stretches. When curves are made use of, it is desirable to limit the radius to a 300-foot minimum in order to insure safety for the road users. In so far as possible, reverse or compound curves should be avoided.

Surface betterment should usually be undertaken by first plowing the sides adjacent to the travelled way for a width sufficient to obtain material to shape up a width of about twenty feet, exclusive of ditches. This plowing may be done at a season of the year when farmers are not as busy as usual, and teams may be spared. The next step is to distribute the plowed material over the proposed roadbed by means of a road grader, so that it will have a crown of about one and one-half inches to the foot. This is too much crown for the finished road, but during the process of consolidation, the middle of the traveled

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way will be more solidly packed than the sides, and the final crown will be about one inch to the foot, which is about right. The side ditches should be shallow and when so designed may be constructed by the grader. After the plowed material has been properly distributed by the road grader, all sod, vegetable or other unfit material, should be raked off the road, and the road drag employed to make the traveled way smooth and hard. The work to this point is performed by a small gang working under a foreman, but after the road has been put in a smooth, hard and even condition by the final betterment dragging, the road should be turned over to a patrolman for maintenance.

The earth road will not long be serviceable without careful and continuous maintenance, and may not be economically maintained until betterment work about along the lines just given, has been done. That is, it should first be put in condition for maintenance.

For the maintenance of earth roads, the patrol system gives excellent results. One patrolman can cover about ten miles of road, or two of the road

sections previously referred to. He should be furnished with a wheelbarrow, pick, shovel, crowbar, axe, stone hammer, garden rake, and a tamp. He should have a road drag for at least each five-mile section of his road, and arrangements made for the use of those drags to drag the road when it is in proper condition for dragging. The patrolman should keep ditches and culverts clean at all times, and repair defects in the surface of the traveled way so that it may be smooth, even, and true. Most of the work of cleaning the sides ditches, where they have been properly constructed, may be done by using the road drag. Loose stones should be raked off the traveled way, and large protruding stones dug out. The patrolman should be instructed to inspect in surface at frequent intervals by lying down flat upon it and looking along it longitudinally. All depressions may be readily seen in such a position, and work done to remedy those depressions will result in a very even longitudinal road surface. Conclusive proof of the value of a smooth and hard surface was obtained on a post road near Ames, Iowa, where the office of Public Roads conducted a series of experiments to determine the power necessary to move a ton over a road with a rough surface and again after the road had been smoothed up. The grade was the same in both instances. In one place where the grade is 5 per cent the power required was reduced 32 per cent by making the rough road smooth and in another where the grade is 9½ per cent the reduction was 34 per cent. Special attention should be given by the patrolman to all structures, repairing them when he is able to do so, and in other cases, notifying his superior officer of the necessity for repair. The work of dragging a road is comparatively small, yet the result accomplished, if the dragging is done systematically, is surprising. The drag should be light, so weighted that it will sufficiently cut the material encountered in the roadbed, and when hauled over the road, it should be at an angle of about 45 degrees, the end next the middle of the road being behind the other. Dragging should begin on the side of the road, the return being made on the opposite side. With each trip a small amount of earth is pushed towards the middle of the road. Endeavor should be made to move just enough earth to obtain for the surface a crown of about one inch to the foot. If the drag cuts too much, change the hitch or lighten the weight on the drag. Dragging will cost approximately \$1.25 a mile depending upon the width of the road and cost of labor and teams, and during the year, from twenty to thirty draggings will be necessary at a cost of from \$35 to \$40 a mile. To accomplish good results dragging must be done frequently and whenever the soil is in suitable condition for it.

When you have your earth road in good shape through constant and conscientious maintenance, it may be very materially improved by the addition of a little fine gravel or even coarse sand. This may be spread evenly over the earth surface in a very thin layer, a half inch or an inch in thickness. Traffic will gradually work this material into the road, and then more may be added. Occasionally

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this bill not with extravagant expectations, but with confident expectation that it will be of very wide-reaching benefit and, incidentally, it will be of advantage to the investing community for I can imagine no more satisfactory and solid investments than this system will afford those who have money to use."

In our next issue of the Utah Farmer we will give a review of the bill as it passed congress.

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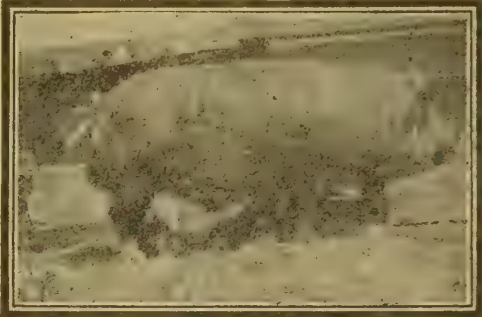
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